



# 行動通信電信終端設備檢驗報告

產品名稱：Mobile Cellular Phone

廠牌：Motorola

型號：XT2097-14

申請廠商：Motorola Mobility LLC  
222 W, Merchandise Mart Plaza, Chicago, IL60654 USA

製造廠商：Motorola Mobility LLC  
222 W, Merchandise Mart Plaza, Chicago, IL60654 USA

技術規範：國家通訊傳播委員會行動通信電信終端設備技術規範

- 測試產品接收日期為民國 110 年 5 月 19 日
- 於民國 110 年 5 月 27 日開始測試，民國 110 年 5 月 27 日結束測試。
- 此份試驗報告，僅針對保留於本實驗室的試驗樣品有效。
- 未獲本公司書面允許，證書或報告不得節錄複製。

耕興股份有限公司電磁相容及無線通信實驗室

報告簽署人：吳忠泰



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## 報告履歷

| 報告編號        | 報告版本 | 說明                        | 報告發行日期          |
|-------------|------|---------------------------|-----------------|
| TG0N1917-03 | 01   | 初版                        | 2021 年 6 月 22 日 |
| TG0N1917-03 | 02   | 1. 修改隨貨週邊<br>2. 加入頻率穩定度章節 | 2021 年 8 月 2 日  |
|             |      |                           |                 |
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|             |      |                           |                 |

## 測試結果總表

| 報告章節 | 法規章節                          | 檢驗項目     | 結果判定 | 備註                                               |
|------|-------------------------------|----------|------|--------------------------------------------------|
| 2    | 6.5.1                         | 工作頻帶     | 符合   | Tx : 890.2 ~ 914.8 MHz<br>Rx : 935.2 ~ 959.8 MHz |
| 2    | 6.5.3                         | 收發頻率間隔   | 符合   | GSM900: 45 MHz                                   |
| 2    | 6.5.4                         | 頻道間隔     | 符合   | 200 kHz                                          |
| 附錄 A | 6.5.2.                        | 最大發射輸出功率 | 符合   | 32.86 dBm                                        |
| 附錄 A | 6.5.6                         | 頻率穩定度    | 符合   | 24 Hz                                            |
| 附錄 A | 6.5.2.2.1.3                   | 擷取叢訊功率   | 符合   | -                                                |
| 附錄 A | 5.2                           | 電壓條件     | 符合   | -                                                |
| 附錄 A | 6.6.2                         | 電波功率密度   | 不適用  | -                                                |
| 附錄 B | 6.5.7                         | 調變頻譜     | 符合   | -                                                |
| 附錄 C | 6.5.5.1<br>6.5.5.2<br>6.5.5.3 | 混附發射     | 符合   | -                                                |

## 符合性聲明:

上述報告所列測試結果判定，不納入不確定度評估，且依法規所列限制值或製造商宣告作為判定準則。

## 意見與解釋:

報告中 EUT 呈現的技術規格由製造商提供，製造商承擔所有規格準確性的責任。

報告審查: 鄭文凱

報告製作: 魏子芹



## 1. 一般資料

### 1.1 測試方法及依據

國家通訊傳播委員會【PLMN ALL】行動通信電信終端設備技術規範109年09月25日修訂版

### 1.2 待測物特性與規格

| Product Specification subjective to this standard |                                                    |
|---------------------------------------------------|----------------------------------------------------|
| Equipment                                         | Mobile Cellular Phone                              |
| Brand Name                                        | Motorola                                           |
| Model Name                                        | XT2097-14                                          |
| IMEI Code                                         | IMEI 1: 354625410765099<br>IMEI 2: 354625411265099 |
| Tx Frequency                                      | GSM900 : 890 MHz ~ 915 MHz                         |
| Rx Frequency                                      | GSM900 : 935 MHz ~ 960 MHz                         |
| Maximum Output Power to Antenna                   | GSM900: 32.86 dBm (Class 4)                        |
| HW Version                                        | DVT2                                               |
| Type of Modulation                                | GMSK                                               |
| EUT Stage                                         | Identical Prototype                                |

**Remark:**

1. For other wireless features of this EUT, test report will be issued separately.
2. The above EUT's information was declared by manufacturer.

| Antenna Information |            |        |           |                        |
|---------------------|------------|--------|-----------|------------------------|
| Antenna 0           | Brand Name | Moto   | Peak Gain | GSM900: -5.8 dBi       |
|                     | Model Name | M6210L | Type      | Fixed Internal Antenna |

**Remark:**

1. The detail internal, external and transmit antenna photo please refer to Sporton report no.: EP0N1917-03.
2. The above EUT's information was declared by manufacturer. Please refer to Comments and Explanations in report summary.



| Accessory List |                              |
|----------------|------------------------------|
| AC Adapter 1   | Brand Name : Motorola        |
|                | Model Name : MC-101          |
|                | Manufacturer : Chenyang      |
| AC Adapter 2   | Brand Name : Motorola        |
|                | Model Name : MC-101          |
|                | Manufacturer : Salcomp       |
| AC Adapter 3   | Brand Name : Motorola        |
|                | Model Name : MC-101          |
|                | Manufacturer : Aohai         |
| Battery 1      | Brand Name : Motorola        |
|                | Model Name : JK50            |
|                | Manufacturer : Sunwoda       |
| Battery 2      | Brand Name : Motorola        |
|                | Model Name : JK50            |
|                | Manufacturer : ATL           |
| Battery 3      | Brand Name : Motorola        |
|                | Model Name : JK50            |
|                | Manufacturer : SCUD          |
| Earphone       | Brand Name : Motorola        |
|                | Model Name : NLD-EM313A-23SF |
| USB Cable      | Brand Name : Motorola        |
|                | Model Name : S928C92501      |



### 1.3 測試環境

|        |                                                              |
|--------|--------------------------------------------------------------|
| 實驗室名稱  | 耕興股份有限公司電磁相容及無線通信實驗室                                         |
| 實驗室資訊  | 桃園市龜山區華亞一路 52 號<br>TEL: +886-3-3273456 / FAX: +886-3-3284978 |
| 耕興場地編號 | TH03-HY                                                      |

| Test Item: Conducted |                    |
|----------------------|--------------------|
| Test Engineer        | 季怡然                |
| Ambient Temperature  | 23~24°C            |
| Relative Humidity    | 54~55%             |
| Extreme Temperature  | -10°C and 55°C     |
| Normal Voltage       | DC3.8V             |
| Extreme Voltage      | DC4.4V and DC 3.5V |

### 1.4 測試模式

#### GSM900:

此測試共有3個測試模式:

模式一 : 頻道1 (低頻道)

模式二 : 頻道62 (中間頻道)

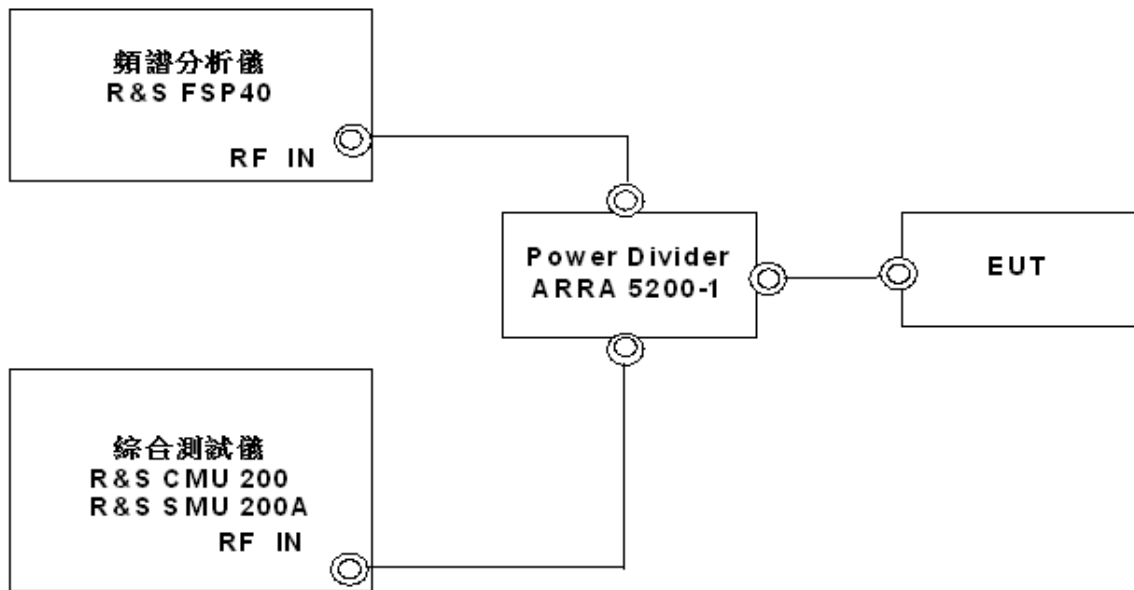
模式三 : 頻道124 (高頻道)



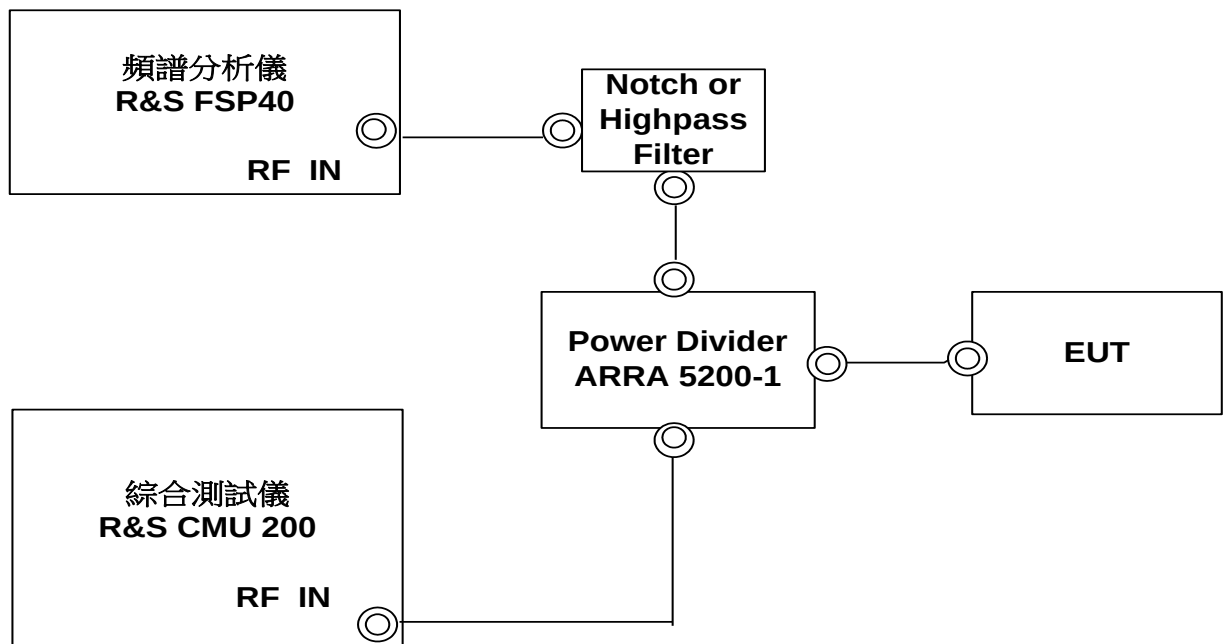
## 2. 一般特性檢驗

| GSM900 |                              |                                                                                        |
|--------|------------------------------|----------------------------------------------------------------------------------------|
| 項次     | 檢驗項目                         | 合格標準                                                                                   |
| 1      | 工作頻帶<br>( $n = 1 \sim 124$ ) | Tx : $890 + n * 0.2$ MHz                                                               |
|        |                              | Rx : $935 + n * 0.2$ MHz                                                               |
| 2      | 收發頻率間隔                       | 45 MHz                                                                                 |
| 3      | 頻道間隔                         | 200 kHz                                                                                |
| 4      | 最大發射輸出功率                     | 8W: 39dBm(Class 2)<br>5W: 37dBm(Class 3)<br>2W: 33dBm(Class 4)<br>0.8W: 29dBm(Class 5) |
| 5      | 頻率穩定度                        | 頻率誤差(Hz) : $\leq 90$ Hz                                                                |
| 6      | 擷取叢訊功率                       | -                                                                                      |
| 7      | 調變頻譜                         | 偏移載波頻率在100~1800kHz內調變頻譜(dB) 、<br>功率轉換瞬態(dBm)<br>限制值參照5.5及5.6                           |
| 8      | 混附發射(dBm)                    | 連線狀態時限制值參照5.3                                                                          |
|        |                              | 空閒狀態時限制值參照5.4                                                                          |
| 9      | 電波功率密度                       | 限制值參照5.7                                                                               |
| 10     | 電壓條件                         | 參照5.8                                                                                  |

### 3. 檢驗接續圖



一般特性接續圖(一)



混附波輻射接續圖(Conducted)



#### 4. 檢驗使用儀器

| Instrument             | Brand Name      | Model No. | Serial No. | Characteristics           | Calibration Date | Test Date    | Due Date      | Remark              |
|------------------------|-----------------|-----------|------------|---------------------------|------------------|--------------|---------------|---------------------|
| Hygrometer             | Testo           | 608-H1    | 34893241   | N/A                       | Mar. 03, 2021    | May 27, 2021 | Mar. 02, 2022 | Conducted (TH03-HY) |
| Spectrum Analyzer      | Rohde & Schwarz | FSP30     | 101329     | 9kHz~30GHz                | Sep. 03, 2020    | May 27, 2021 | Sep. 02, 2021 | Conducted (TH03-HY) |
| Temperature Chamber    | ESPEC           | SH-641    | 92013720   | -40℃ ~90℃                 | Sep. 14, 2020    | May 27, 2021 | Sep. 13, 2021 | Conducted (TH03-HY) |
| Base Station (Measure) | Rohde & Schwarz | CMU200    | 117995     | GSM / GPRS / WCDMA / CDMA | Sep. 07, 2020    | May 27, 2021 | Sep. 06, 2021 | Conducted (TH03-HY) |

## 5. 量測設定及限制值

### 5.1 混附波輻射發射頻帶內設定值

| 頻帶                      | 偏離載波頻率               | 測量頻寬   |
|-------------------------|----------------------|--------|
| 900MHz相關發射頻帶：890-915MHz | $\geq 1.8\text{MHz}$ | 30 kHz |

### 5.2 混附波輻射發射頻帶外設定值

| 頻帶                     | 偏離相關發射頻帶邊緣           | 測量頻寬    |
|------------------------|----------------------|---------|
| 100kHz—50MHz           | —                    | 10 kHz  |
| 50MHz—500MHz           | —                    | 100 kHz |
| 500MHz以上，但在表一之一相關發射頻帶外 | $\geq 2\text{ MHz}$  | 30 kHz  |
|                        | $\geq 5\text{ MHz}$  | 100 kHz |
|                        | $\geq 10\text{ MHz}$ | 300 kHz |
|                        | $\geq 20\text{ MHz}$ | 1 MHz   |
|                        | $\geq 30\text{ MHz}$ | 3 MHz   |

### 5.3 混附波輻射連線狀態限制值

| 頻率範圍            | 功率位準 (dBm) |
|-----------------|------------|
|                 | GSM 900    |
| 100kHz 至 1GHz   | -36        |
| 1GHz 至 12.75GHz | -30        |

### 5.4 混附波輻射空閒狀態限制值

| 頻率範圍               | 功率位準 (dBm) |
|--------------------|------------|
| 9kHz 至 880MHz      | -57        |
| 880MHz 至 915MHz    | -59        |
| 915MHz 至 1GHz      | -57        |
| 1GHz 至 1710MHz     | -47        |
| 1710MHz 至 1785MHz  | -53        |
| 1785MHz 至 12.75GHz | -47        |

### 5.5 調變頻譜（Spectrum due to the modulation）設定及限制值

| 功率(dBm) |     | 在偏移載波下列頻率(kHz)時其相對於載波功率之最大允許值(dB) |     |     |     |               |                |                |                |       |
|---------|-----|-----------------------------------|-----|-----|-----|---------------|----------------|----------------|----------------|-------|
|         |     | 30kHz (測量頻寬)                      |     |     |     |               |                | 100kHz (測量頻寬)  |                |       |
|         |     | 100                               | 200 | 250 | 400 | 600~<br><1200 | 1200~<br><1800 | 1800~<br><3000 | 3000~<br><6000 | ≥6000 |
| GSM900  | ≥39 | +0.5                              | -30 | -33 | -60 | -66           | -66            | -69            | -71            | -77   |
|         | 37  | +0.5                              | -30 | -33 | -60 | -64           | -64            | -67            | -69            | -75   |
|         | 35  | +0.5                              | -30 | -33 | -60 | -62           | -62            | -65            | -67            | -73   |
|         | ≤33 | +0.5                              | -30 | -33 | -60 | -60           | -60            | -63            | -65            | -71   |

### 5.6 功率轉換瞬態所產生之頻譜（Spectrum due to switching transients）限制值 GSM 900

| 功率位準   | 載波頻率不同偏移之最大位準 |        |         |         |
|--------|---------------|--------|---------|---------|
|        | 400kHz        | 600kHz | 1200kHz | 1800kHz |
| 39dBm  | -13dBm        | -21dBm | -21dBm  | -24dBm  |
| 37dBm  | -15dBm        | -21dBm | -21dBm  | -24dBm  |
| 35dBm  | -17dBm        | -21dBm | -21dBm  | -24dBm  |
| 33dBm  | -19dBm        | -21dBm | -21dBm  | -24dBm  |
| 31dBm  | -21dBm        | -23dBm | -23dBm  | -26dBm  |
| 29dBm  | -23dBm        | -25dBm | -25dBm  | -28dBm  |
| 27dBm  | -23dBm        | -26dBm | -27dBm  | -30dBm  |
| 25dBm  | -23dBm        | -26dBm | -29dBm  | -32dBm  |
| 23dBm  | -23dBm        | -26dBm | -31dBm  | -34dBm  |
| ≤21dBm | -23dBm        | -26dBm | -32dBm  | -36dBm  |

## 5.7 電波功率密度

### 5.7.1. Limit

本項測試適用於移動式終端設備

| 頻段                  | 電波功率密度最大值               |
|---------------------|-------------------------|
| 700 MHz             | 0.35 mW/cm <sup>2</sup> |
| 900 MHz             | 0.45 mW/cm <sup>2</sup> |
| 1800 MHz            | 0.90 mW/cm <sup>2</sup> |
| 2100 MHz            | 1.00 mW/cm <sup>2</sup> |
| 2500 MHz ~ 2600 MHz | 1.00 mW/cm <sup>2</sup> |
| 3500 MHz            | 1.00 mW/cm <sup>2</sup> |

### 5.7.2. Test Procedure

The following formula was used to calculate the Power Density:

$$S = \frac{PG}{4\pi R^2}$$

Where:

S = Power Density

P = Output Power at Antenna Terminals

G = Gain of Transmit Antenna (linear gain)

R = Distance from Transmitting Antenna

### 5.7.3. Test Result of Power Density

Please refer to 附錄 A.

## 5.8 電壓條件

### 5.8.1. Limit

終端設備之電源電壓應於低極端電壓與高極端電壓之間。終端設備審驗申請者應宣告其標稱電壓 (nominal)、低極端電壓、高極端電壓與關機電壓。若終端設備可操作在一種或多種電源，其低極端電壓不得高於下表限制值，高極端電壓不得低於下表限制值。

| 電源                                        | 低極端電壓                                                                                        | 高極端電壓                                                                 | 常態電壓                                              |
|-------------------------------------------|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|---------------------------------------------------|
| 交流電源                                      | $0.9 \times \text{nominal}$                                                                  | $1.1 \times \text{nominal}$                                           | nominal                                           |
| 調節式鉛酸電池                                   | $0.9 \times \text{nominal}$                                                                  | $1.3 \times \text{nominal}$                                           | $1.1 \times \text{nominal}$                       |
| 非調節式電池：<br>勒克朗社電池 /<br>鋰電池 /<br>水銀電池/鎳鎘電池 | $0.85 \times \text{nominal}$<br>$0.95 \times \text{nominal}$<br>$0.90 \times \text{nominal}$ | nominal<br>$1.1 \times \text{nominal}$<br>$1.1 \times \text{nominal}$ | nominal<br>$1.1 \times \text{nominal}$<br>nominal |

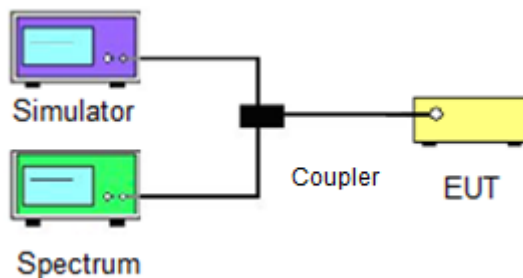
電源電壓低於上表之低極端電壓或高於上表之高極端電壓，終端設備若可通電開機時，不得無效使用第 3 點規定之頻段。

檢測終端設備之電源電壓低於關機電壓時，終端設備不得發射。

### 5.8.2. Test Procedure

終端設備與 WWAN 基地台做連線，以低極端電壓往下調整至客戶宣告之關機電壓，查看終端設備與 WWAN 基地台是否中斷連線。

### 5.8.3. Test Setup



### 5.8.4. Test Result of Voltage Conditions

關機電壓數值 Please refer to 附錄 A.

測試結果：符合

## 5.9 頻率穩定度

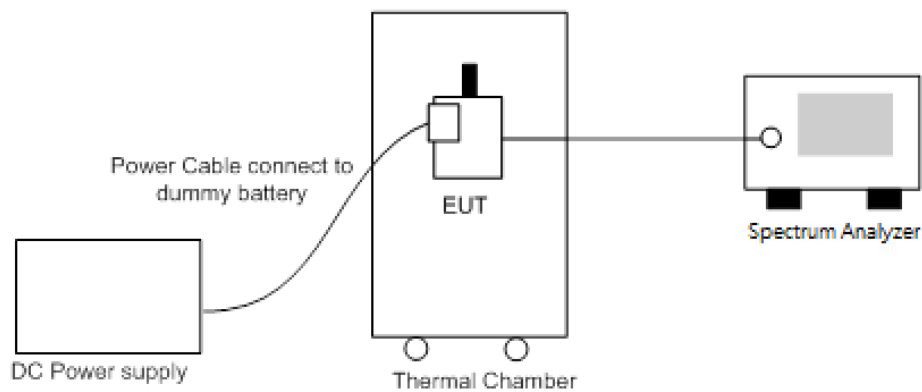
### 5.9.1. Limit

頻率誤差應小於 90Hz。

### 5.9.2. Test Procedures

溫度在攝氏-10℃～55℃間，終端設備於常態環境常態電壓、低極端溫度低極端電壓、低極端溫度高極端電壓、高極端溫度低極端電壓、高極端溫度高極端電壓等五種測試環境下，分別進行頻率量測，經 0/2/5/10 分鐘量測結果，頻率誤差應小於 90Hz。

### 5.9.3. Test Setup



### 5.9.4. Test Result of Frequency Tolerance

Please refer to 附錄A.

**附錄A. 測試結果 - 功率限制/電波功率密度/頻率穩定度**

|         |    |       |           |
|---------|----|-------|-----------|
| 測試環境    | 溫度 | °C    | 23~24     |
|         | 濕度 | %     | 54~55     |
| 測試工程師   |    | ----- | Oscar Chi |
| 天線之方向增益 |    | dBi   | -5.80     |
| 標準供應電壓  |    | VDC   | 3.80      |
| 關機電壓    |    | VDC   | 3.30      |

註: 檢測終端設備之電源電壓低於關機電壓時，終端設備已關機無發射

**A.1 GSM900**

|            |                    |       |       |       |          |     |
|------------|--------------------|-------|-------|-------|----------|-----|
| 傳導發射功率     | 單位                 | 低頻道   | 中頻道   | 高頻道   | 限制       | 結果  |
| 功率控制位準 = 5 | dBm                | 32.82 | 32.86 | 32.82 | 33 +2/-2 | 符合  |
| 電波功率密度     | mW/cm <sup>2</sup> | ----- | ----- | ----- | 0.45     | 不適用 |

註1: Power Class 4

註2: 攜帶式終端設備

| 供電方式  |                | 鋰電池 |      |      |      |       |        |    |
|-------|----------------|-----|------|------|------|-------|--------|----|
| 頻率穩定度 |                | 單位  | 第0分鐘 | 第2分鐘 | 第5分鐘 | 第10分鐘 | 限制     | 結果 |
| 常溫常壓  | 20 ℃ + 4.18 V  | Hz  | -15  | -17  | -20  | -23   | ≤ 90.0 | 符合 |
| 高溫高壓  | 55 ℃ + 4.18 V  | Hz  | -12  | -13  | -15  | -20   | ≤ 90.0 | 符合 |
| 高溫低壓  | 55 ℃ + 3.61 V  | Hz  | 15   | 18   | 21   | 22    | ≤ 90.0 | 符合 |
| 低溫高壓  | -10 ℃ + 4.18 V | Hz  | 14   | 16   | 18   | 24    | ≤ 90.0 | 符合 |
| 低溫低壓  | -10 ℃ + 3.61 V | Hz  | 12   | 14   | 17   | 21    | ≤ 90.0 | 符合 |

# Measurement Report

**ROHDE & SCHWARZ**

報告編號: TGO1917-03

Operator: noname

2021年5月27日 上午 10:14:40

CMU Ident: Rohde&amp;Schwarz, CMU 200-1100.0008.02, 117995, V5.22

Options: 0,B17,B21Var14,B52Var14,B54Var14,B56Var54,B66,COPROC\_FULLL,B83,B85,B89,B96,PCMCIA,WDDC400,K16  
K17,K20,K21,K22,K23,K24,K27,K28,K29,K42,K43,K56,K57,K58,K59,K60,K61,K62,K63,K64,K65,K66,K67  
K68,K69,K83,K84,K85,K86,K88,K839,K849,K859,K869,FMR6,Intel Celeron Mobil,256 MB  
rxtx1

Sequence: - - -

| Test Name and Condition | Lower Limit | Upper Limit | Measured Value | P/F |
|-------------------------|-------------|-------------|----------------|-----|
|-------------------------|-------------|-------------|----------------|-----|

Network: GSM 900, BCCH Channel/Level: 62/-85.0 dBm, TCH Channel: 62, TCH Level (dBm): -85.0, Support GSM, PCL: 5

(Main) Timeslot: 3, Attenuation (In/Out): 5.1/5.1 dB, Slot Mode: Single Slot, Bitstream: PR9, AuxTX: Off

Traffic Mode: Full Rate V1

IMSI: 1. 1.0123456789, Serial: 35462541-076509-9, Revision: PH2P, Number: 111, Traffic: NAN, Power Class: 4

|                          |  |  |        |   |
|--------------------------|--|--|--------|---|
| Call from Mobile:        |  |  | passed | ✓ |
| Keypad Test: (Ref.: 111) |  |  | passed | ✓ |

GSM 900, Channel 1, PCL 5, Timeslot: 3, BS RF Level -85.0 dBm, Attenuation (In/Out) 5.1 dB / 5.1 dB, Meas. Slot: 3

Decoding for modulation: Standard, BER Synch time: 0.20 s

|                                |           |           |           |   |
|--------------------------------|-----------|-----------|-----------|---|
| Average Power: 10 Bursts       | 31.00 dBm | 35.00 dBm | 32.82 dBm | ✓ |
| Peak Burst Power: 10 Bursts    | 31.00 dBm | 35.00 dBm | 32.95 dBm | ✓ |
| Power Time Template: 10 Bursts |           |           | passed    | ✓ |
| Timing Error: 10 Bursts        | -2.00 Bit | 2.00 Bit  | 0.36 Bit  | ✓ |
| Phase Error Peak: 10 Bursts    | -20.00 ?  | 20.00 ?   | 2.05 ?    | ✓ |
| Phase Error RMS: 10 Bursts     |           | 5.00 ?    | 0.72 ?    | ✓ |
| Frequency Error: 10 Bursts     | -90.00 Hz | 90.00 Hz  | -2.39 Hz  | ✓ |

GSM 900, Channel 1, PCL 19, Timeslot: 3, BS RF Level -85.0 dBm, Attenuation (In/Out) 5.1 dB / 5.1 dB, Meas. Slot: 3

Decoding for modulation: Standard, BER Synch time: 0.20 s

|                             |           |          |          |   |
|-----------------------------|-----------|----------|----------|---|
| Phase Error Peak: 10 Bursts | -20.00 ?  | 20.00 ?  | 1.84 ?   | ✓ |
| Phase Error RMS: 10 Bursts  |           | 5.00 ?   | 0.73 ?   | ✓ |
| Frequency Error: 10 Bursts  | -90.00 Hz | 90.00 Hz | -0.39 Hz | ✓ |

GSM 900, Channel 62, PCL 5, Timeslot: 3, BS RF Level -85.0 dBm, Attenuation (In/Out) 5.1 dB / 5.1 dB, Meas. Slot: 3

Decoding for modulation: Standard, BER Synch time: 0.20 s

|                                |           |           |           |   |
|--------------------------------|-----------|-----------|-----------|---|
| Average Power: 10 Bursts       | 31.00 dBm | 35.00 dBm | 32.86 dBm | ✓ |
| Peak Burst Power: 10 Bursts    | 31.00 dBm | 35.00 dBm | 32.98 dBm | ✓ |
| Power Time Template: 10 Bursts |           |           | passed    | ✓ |
| Timing Error: 10 Bursts        | -2.00 Bit | 2.00 Bit  | 0.36 Bit  | ✓ |
| Phase Error Peak: 10 Bursts    | -20.00 ?  | 20.00 ?   | 2.09 ?    | ✓ |
| Phase Error RMS: 10 Bursts     |           | 5.00 ?    | 0.72 ?    | ✓ |
| Frequency Error: 10 Bursts     | -90.00 Hz | 90.00 Hz  | 0.45 Hz   | ✓ |

GSM 900, Channel 62, PCL 6, Timeslot: 3, BS RF Level -85.0 dBm, Attenuation (In/Out) 5.1 dB / 5.1 dB, Meas. Slot: 3

Decoding for modulation: Standard, BER Synch time: 0.20 s

|                                |           |           |           |   |
|--------------------------------|-----------|-----------|-----------|---|
| Average Power: 10 Bursts       | 28.00 dBm | 34.00 dBm | 30.96 dBm | ✓ |
| Peak Burst Power: 10 Bursts    | 28.00 dBm | 34.00 dBm | 31.09 dBm | ✓ |
| Power Time Template: 10 Bursts |           |           | passed    | ✓ |
| Timing Error: 10 Bursts        | -2.00 Bit | 2.00 Bit  | 0.36 Bit  | ✓ |

GSM 900, Channel 62, PCL 7, Timeslot: 3, BS RF Level -85.0 dBm, Attenuation (In/Out) 5.1 dB / 5.1 dB, Meas. Slot: 3

Decoding for modulation: Standard, BER Synch time: 0.20 s

# Measurement Report

**ROHDE & SCHWARZ**

報告編號：TGON1917-03

| Test Name and Condition        | Lower Limit | Upper Limit | Measured Value | P/F |
|--------------------------------|-------------|-------------|----------------|-----|
| Average Power: 10 Bursts       | 27.00 dBm   | 31.00 dBm   | 29.21 dBm      | ✓   |
| Peak Burst Power: 10 Bursts    | 27.00 dBm   | 31.00 dBm   | 29.33 dBm      | ✓   |
| Power Time Template: 10 Bursts |             |             | passed         | ✓   |
| Timing Error: 10 Bursts        | -2.00 Bit   | 2.00 Bit    | 0.36 Bit       | ✓   |

GSM 900, Channel 62, PCL 8, Timeslot: 3, BS RF Level -85.0 dBm, Attenuation (In/Out) 5.1 dB / 5.1 dB, Meas. Slot: 3

Decoding for modulation: Standard, BER Synch time: 0.20 s

|                                |           |           |           |   |
|--------------------------------|-----------|-----------|-----------|---|
| Average Power: 10 Bursts       | 24.00 dBm | 30.00 dBm | 27.20 dBm | ✓ |
| Peak Burst Power: 10 Bursts    | 24.00 dBm | 30.00 dBm | 27.35 dBm | ✓ |
| Power Time Template: 10 Bursts |           |           | passed    | ✓ |
| Timing Error: 10 Bursts        | -2.00 Bit | 2.00 Bit  | 0.37 Bit  | ✓ |

GSM 900, Channel 62, PCL 9, Timeslot: 3, BS RF Level -85.0 dBm, Attenuation (In/Out) 5.1 dB / 5.1 dB, Meas. Slot: 3

Decoding for modulation: Standard, BER Synch time: 0.20 s

|                                |           |           |           |   |
|--------------------------------|-----------|-----------|-----------|---|
| Average Power: 10 Bursts       | 22.00 dBm | 28.00 dBm | 25.14 dBm | ✓ |
| Peak Burst Power: 10 Bursts    | 22.00 dBm | 28.00 dBm | 25.28 dBm | ✓ |
| Power Time Template: 10 Bursts |           |           | passed    | ✓ |
| Timing Error: 10 Bursts        | -2.00 Bit | 2.00 Bit  | 0.37 Bit  | ✓ |

GSM 900, Channel 62, PCL 10, Timeslot: 3, BS RF Level -85.0 dBm, Attenuation (In/Out) 5.1 dB / 5.1 dB, Meas. Slot: 3

Decoding for modulation: Standard, BER Synch time: 0.20 s

|                                |           |           |           |   |
|--------------------------------|-----------|-----------|-----------|---|
| Average Power: 10 Bursts       | 20.00 dBm | 26.00 dBm | 23.14 dBm | ✓ |
| Peak Burst Power: 10 Bursts    | 20.00 dBm | 26.00 dBm | 23.26 dBm | ✓ |
| Power Time Template: 10 Bursts |           |           | passed    | ✓ |
| Timing Error: 10 Bursts        | -2.00 Bit | 2.00 Bit  | 0.36 Bit  | ✓ |

GSM 900, Channel 62, PCL 11, Timeslot: 3, BS RF Level -85.0 dBm, Attenuation (In/Out) 5.1 dB / 5.1 dB, Meas. Slot: 3

Decoding for modulation: Standard, BER Synch time: 0.20 s

|                                |           |           |           |   |
|--------------------------------|-----------|-----------|-----------|---|
| Average Power: 10 Bursts       | 18.00 dBm | 24.00 dBm | 21.20 dBm | ✓ |
| Peak Burst Power: 10 Bursts    | 18.00 dBm | 24.00 dBm | 21.34 dBm | ✓ |
| Power Time Template: 10 Bursts |           |           | passed    | ✓ |
| Timing Error: 10 Bursts        | -2.00 Bit | 2.00 Bit  | 0.38 Bit  | ✓ |

GSM 900, Channel 62, PCL 12, Timeslot: 3, BS RF Level -85.0 dBm, Attenuation (In/Out) 5.1 dB / 5.1 dB, Meas. Slot: 3

Decoding for modulation: Standard, BER Synch time: 0.20 s

|                                |           |           |           |   |
|--------------------------------|-----------|-----------|-----------|---|
| Average Power: 10 Bursts       | 16.00 dBm | 22.00 dBm | 19.14 dBm | ✓ |
| Peak Burst Power: 10 Bursts    | 16.00 dBm | 22.00 dBm | 19.29 dBm | ✓ |
| Power Time Template: 10 Bursts |           |           | passed    | ✓ |
| Timing Error: 10 Bursts        | -2.00 Bit | 2.00 Bit  | 0.36 Bit  | ✓ |

GSM 900, Channel 62, PCL 13, Timeslot: 3, BS RF Level -85.0 dBm, Attenuation (In/Out) 5.1 dB / 5.1 dB, Meas. Slot: 3

Decoding for modulation: Standard, BER Synch time: 0.20 s

|                                |           |           |           |   |
|--------------------------------|-----------|-----------|-----------|---|
| Average Power: 10 Bursts       | 14.00 dBm | 20.00 dBm | 17.01 dBm | ✓ |
| Peak Burst Power: 10 Bursts    | 14.00 dBm | 20.00 dBm | 17.13 dBm | ✓ |
| Power Time Template: 10 Bursts |           |           | passed    | ✓ |
| Timing Error: 10 Bursts        | -2.00 Bit | 2.00 Bit  | 0.36 Bit  | ✓ |

GSM 900, Channel 62, PCL 14, Timeslot: 3, BS RF Level -85.0 dBm, Attenuation (In/Out) 5.1 dB / 5.1 dB, Meas. Slot: 3

Decoding for modulation: Standard, BER Synch time: 0.20 s

|                                |           |           |           |   |
|--------------------------------|-----------|-----------|-----------|---|
| Average Power: 10 Bursts       | 12.00 dBm | 18.00 dBm | 15.05 dBm | ✓ |
| Peak Burst Power: 10 Bursts    | 12.00 dBm | 18.00 dBm | 15.19 dBm | ✓ |
| Power Time Template: 10 Bursts |           |           | passed    | ✓ |
| Timing Error: 10 Bursts        | -2.00 Bit | 2.00 Bit  | 0.37 Bit  | ✓ |

# Measurement Report

**ROHDE & SCHWARZ**

報告編號: TGN1917-03

| Test Name and Condition                                                                                               | Lower Limit | Upper Limit | Measured Value | P/F |
|-----------------------------------------------------------------------------------------------------------------------|-------------|-------------|----------------|-----|
| GSM 900, Channel 62, PCL 15, Timeslot: 3, BS RF Level -85.0 dBm, Attenuation (In/Out) 5.1 dB / 5.1 dB, Meas. Slot: 3  |             |             |                |     |
| Decoding for modulation: Standard, BER Synch time: 0.20 s                                                             |             |             |                |     |
| Average Power: 10 Bursts                                                                                              | 10.00 dBm   | 16.00 dBm   | 12.82 dBm      | ✓   |
| Peak Burst Power: 10 Bursts                                                                                           | 10.00 dBm   | 16.00 dBm   | 12.97 dBm      | ✓   |
| Power Time Template: 10 Bursts                                                                                        |             |             | passed         | ✓   |
| Timing Error: 10 Bursts                                                                                               | -2.00 Bit   | 2.00 Bit    | 0.37 Bit       | ✓   |
| GSM 900, Channel 62, PCL 16, Timeslot: 3, BS RF Level -85.0 dBm, Attenuation (In/Out) 5.1 dB / 5.1 dB, Meas. Slot: 3  |             |             |                |     |
| Decoding for modulation: Standard, BER Synch time: 0.20 s                                                             |             |             |                |     |
| Average Power: 10 Bursts                                                                                              | 6.00 dBm    | 16.00 dBm   | 10.74 dBm      | ✓   |
| Peak Burst Power: 10 Bursts                                                                                           | 6.00 dBm    | 16.00 dBm   | 10.89 dBm      | ✓   |
| Power Time Template: 10 Bursts                                                                                        |             |             | passed         | ✓   |
| Timing Error: 10 Bursts                                                                                               | -2.00 Bit   | 2.00 Bit    | 0.36 Bit       | ✓   |
| GSM 900, Channel 62, PCL 17, Timeslot: 3, BS RF Level -85.0 dBm, Attenuation (In/Out) 5.1 dB / 5.1 dB, Meas. Slot: 3  |             |             |                |     |
| Decoding for modulation: Standard, BER Synch time: 0.20 s                                                             |             |             |                |     |
| Average Power: 10 Bursts                                                                                              | 4.00 dBm    | 14.00 dBm   | 8.68 dBm       | ✓   |
| Peak Burst Power: 10 Bursts                                                                                           | 4.00 dBm    | 14.00 dBm   | 8.82 dBm       | ✓   |
| Power Time Template: 10 Bursts                                                                                        |             |             | passed         | ✓   |
| Timing Error: 10 Bursts                                                                                               | -2.00 Bit   | 2.00 Bit    | 0.36 Bit       | ✓   |
| GSM 900, Channel 62, PCL 18, Timeslot: 3, BS RF Level -85.0 dBm, Attenuation (In/Out) 5.1 dB / 5.1 dB, Meas. Slot: 3  |             |             |                |     |
| Decoding for modulation: Standard, BER Synch time: 0.20 s                                                             |             |             |                |     |
| Average Power: 10 Bursts                                                                                              | 2.00 dBm    | 12.00 dBm   | 6.72 dBm       | ✓   |
| Peak Burst Power: 10 Bursts                                                                                           | 2.00 dBm    | 12.00 dBm   | 6.87 dBm       | ✓   |
| Power Time Template: 10 Bursts                                                                                        |             |             | passed         | ✓   |
| Timing Error: 10 Bursts                                                                                               | -2.00 Bit   | 2.00 Bit    | 0.36 Bit       | ✓   |
| GSM 900, Channel 62, PCL 19, Timeslot: 3, BS RF Level -85.0 dBm, Attenuation (In/Out) 5.1 dB / 5.1 dB, Meas. Slot: 3  |             |             |                |     |
| Decoding for modulation: Standard, BER Synch time: 0.20 s                                                             |             |             |                |     |
| Average Power: 10 Bursts                                                                                              | 0.00 dBm    | 10.00 dBm   | 4.70 dBm       | ✓   |
| Peak Burst Power: 10 Bursts                                                                                           | 0.00 dBm    | 10.00 dBm   | 4.86 dBm       | ✓   |
| Power Time Template: 10 Bursts                                                                                        |             |             | passed         | ✓   |
| Timing Error: 10 Bursts                                                                                               | -2.00 Bit   | 2.00 Bit    | 0.36 Bit       | ✓   |
| Phase Error Peak: 10 Bursts                                                                                           | -20.00 ?    | 20.00 ?     | 1.93 ?         | ✓   |
| Phase Error RMS: 10 Bursts                                                                                            |             | 5.00 ?      | 0.69 ?         | ✓   |
| Frequency Error: 10 Bursts                                                                                            | -90.00 Hz   | 90.00 Hz    | 5.23 Hz        | ✓   |
| GSM 900, Channel 124, PCL 5, Timeslot: 3, BS RF Level -85.0 dBm, Attenuation (In/Out) 5.1 dB / 5.1 dB, Meas. Slot: 3  |             |             |                |     |
| Decoding for modulation: Standard, BER Synch time: 0.20 s                                                             |             |             |                |     |
| Average Power: 10 Bursts                                                                                              | 31.00 dBm   | 35.00 dBm   | 32.82 dBm      | ✓   |
| Peak Burst Power: 10 Bursts                                                                                           | 31.00 dBm   | 35.00 dBm   | 32.97 dBm      | ✓   |
| Power Time Template: 10 Bursts                                                                                        |             |             | passed         | ✓   |
| Timing Error: 10 Bursts                                                                                               | -2.00 Bit   | 2.00 Bit    | 0.36 Bit       | ✓   |
| Phase Error Peak: 10 Bursts                                                                                           | -20.00 ?    | 20.00 ?     | 2.05 ?         | ✓   |
| Phase Error RMS: 10 Bursts                                                                                            |             | 5.00 ?      | 0.72 ?         | ✓   |
| Frequency Error: 10 Bursts                                                                                            | -90.00 Hz   | 90.00 Hz    | -0.39 Hz       | ✓   |
| GSM 900, Channel 124, PCL 19, Timeslot: 3, BS RF Level -85.0 dBm, Attenuation (In/Out) 5.1 dB / 5.1 dB, Meas. Slot: 3 |             |             |                |     |
| Decoding for modulation: Standard, BER Synch time: 0.20 s                                                             |             |             |                |     |
| Phase Error Peak: 10 Bursts                                                                                           | -20.00 ?    | 20.00 ?     | 1.90 ?         | ✓   |
| Phase Error RMS: 10 Bursts                                                                                            |             | 5.00 ?      | 0.70 ?         | ✓   |
| Frequency Error: 10 Bursts                                                                                            | -90.00 Hz   | 90.00 Hz    | 4.71 Hz        | ✓   |

# Measurement Report



ROHDE & SCHWARZ

報告編號：TGON1917-03

| Test Name and Condition | Lower Limit | Upper Limit | Measured Value | P/F |
|-------------------------|-------------|-------------|----------------|-----|
| Call Release Test:      |             |             | passed         | ✓   |

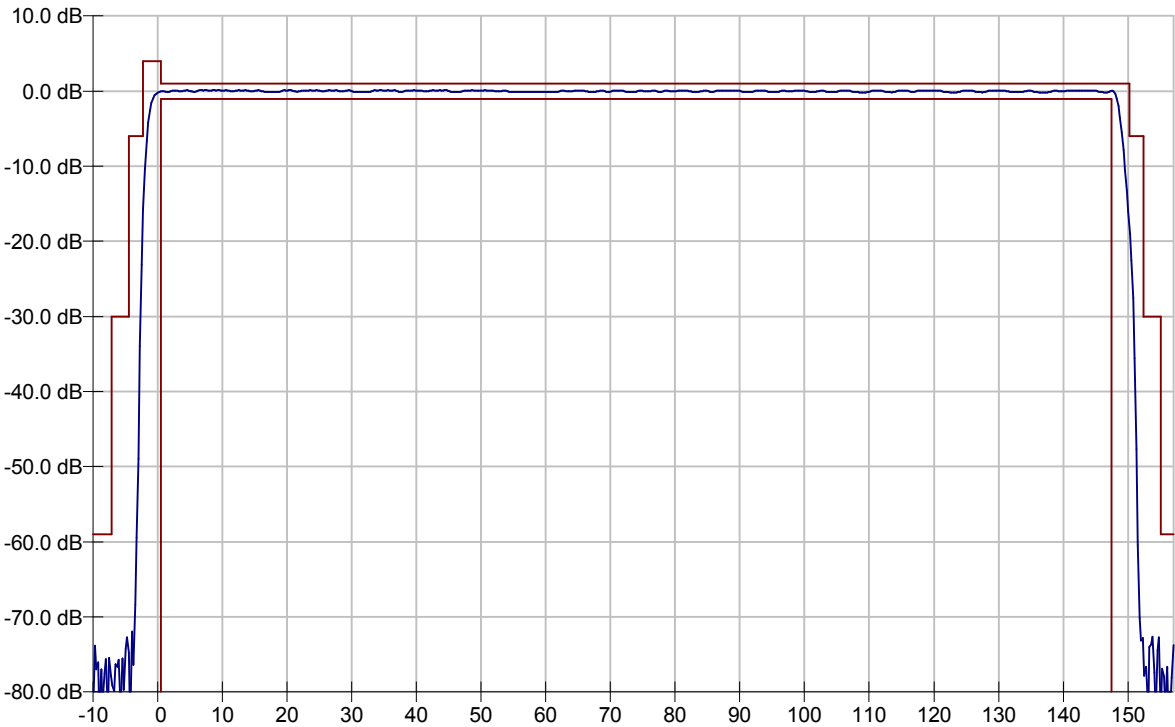
MS Serial Number: 35462541-076509-9

Result:  
(Execution Time: 33.2 Seconds)

89 Tests passed / 0 Tests failed

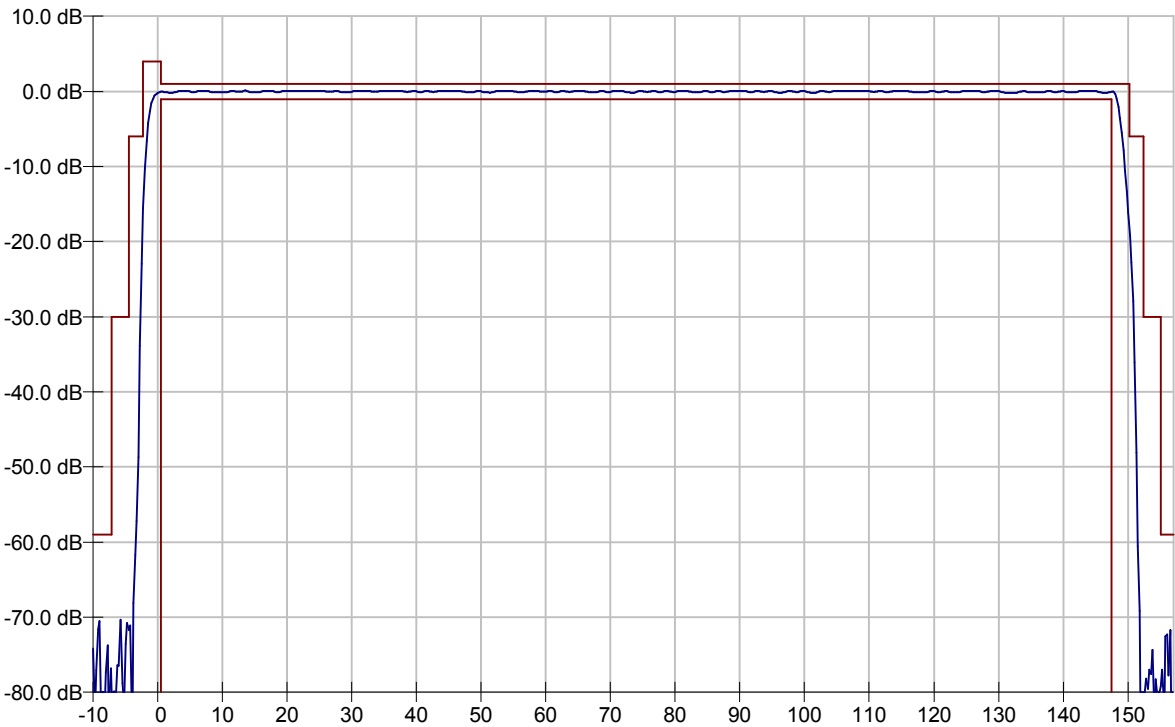
## Annex: Power Graphic

PCL: 5, Channel: 1, Reference Power: 0.0 dBm



## Annex: Power Graphic

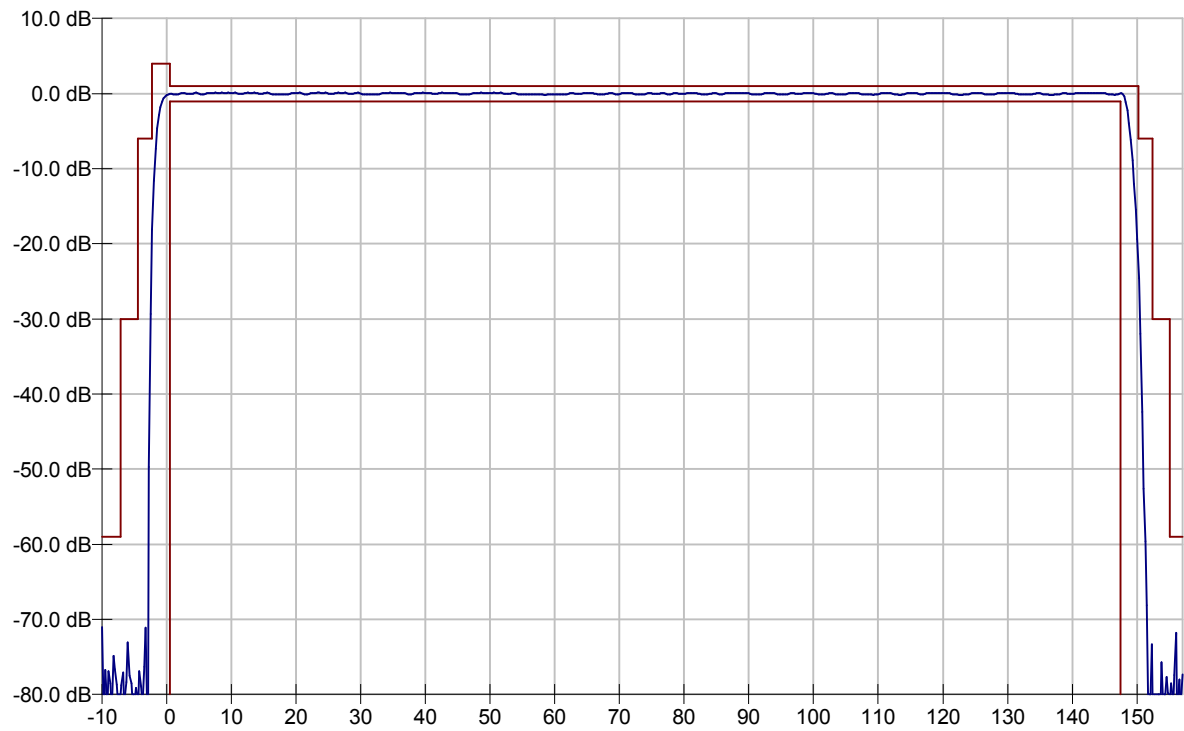
PCL: 5, Channel: 62, Reference Power: 0.0 dBm





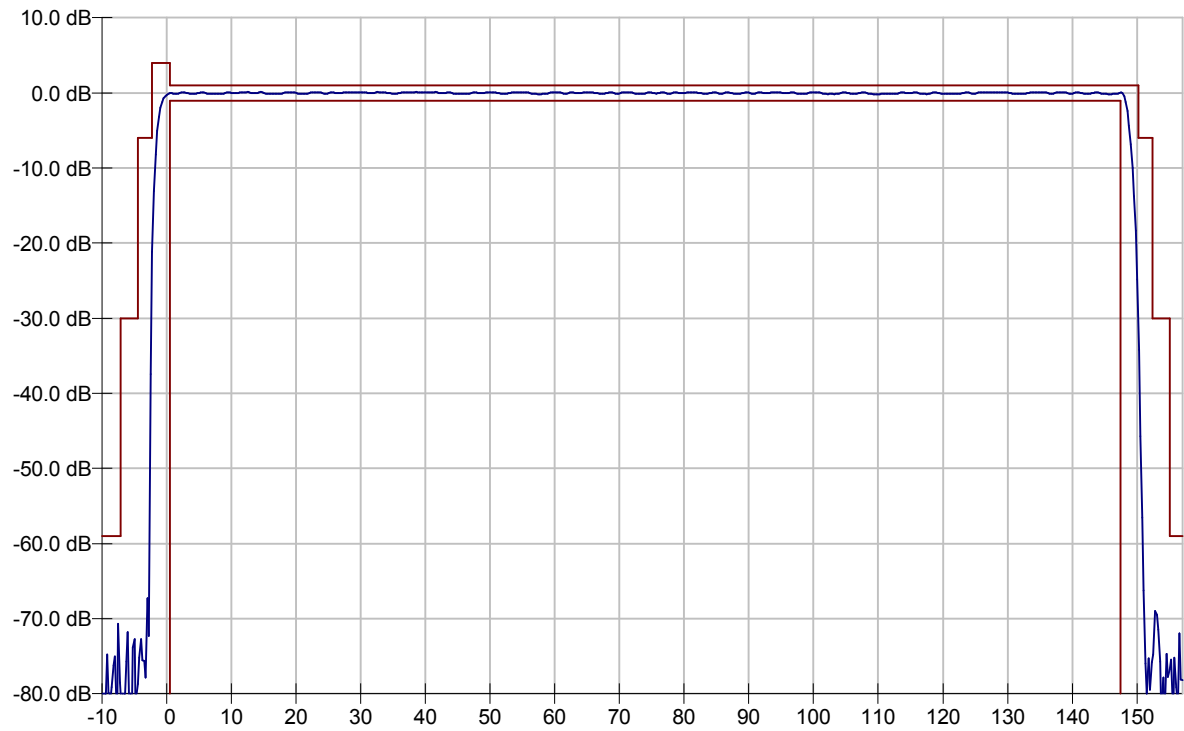
## Annex: Power Graphic

PCL: 6, Channel: 62, Reference Power: 0.0 dBm



## Annex: Power Graphic

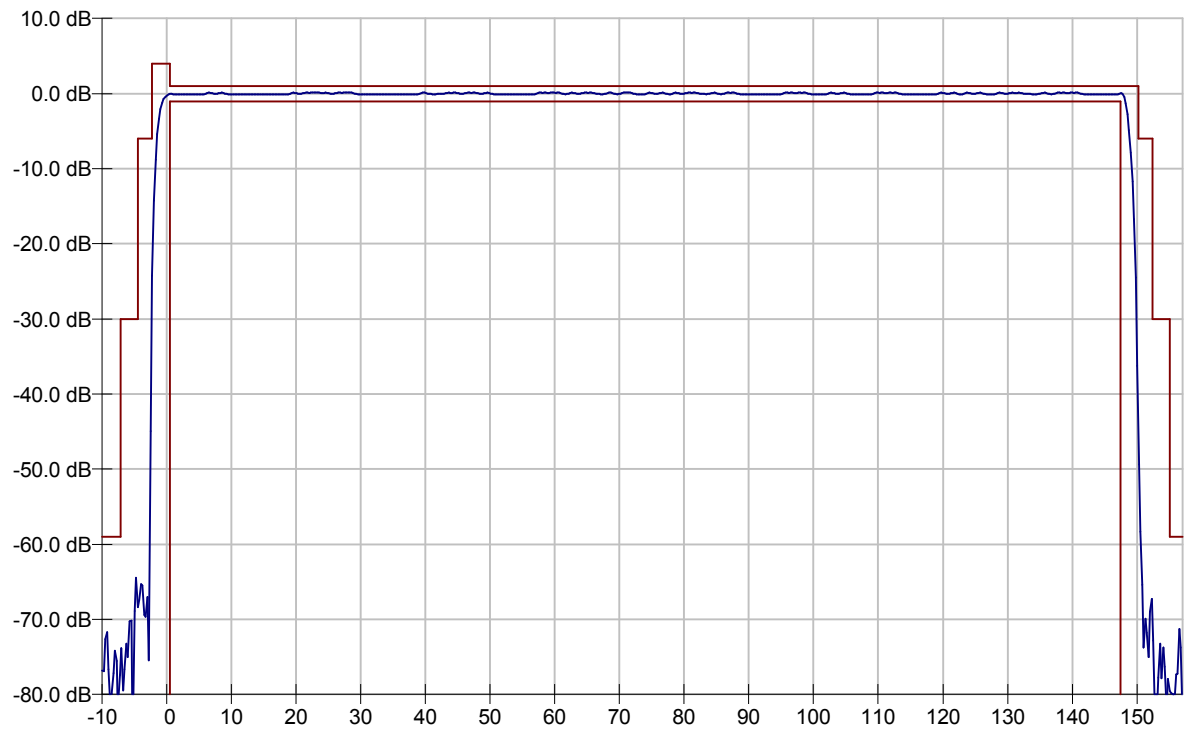
PCL: 7, Channel: 62, Reference Power: 0.0 dBm





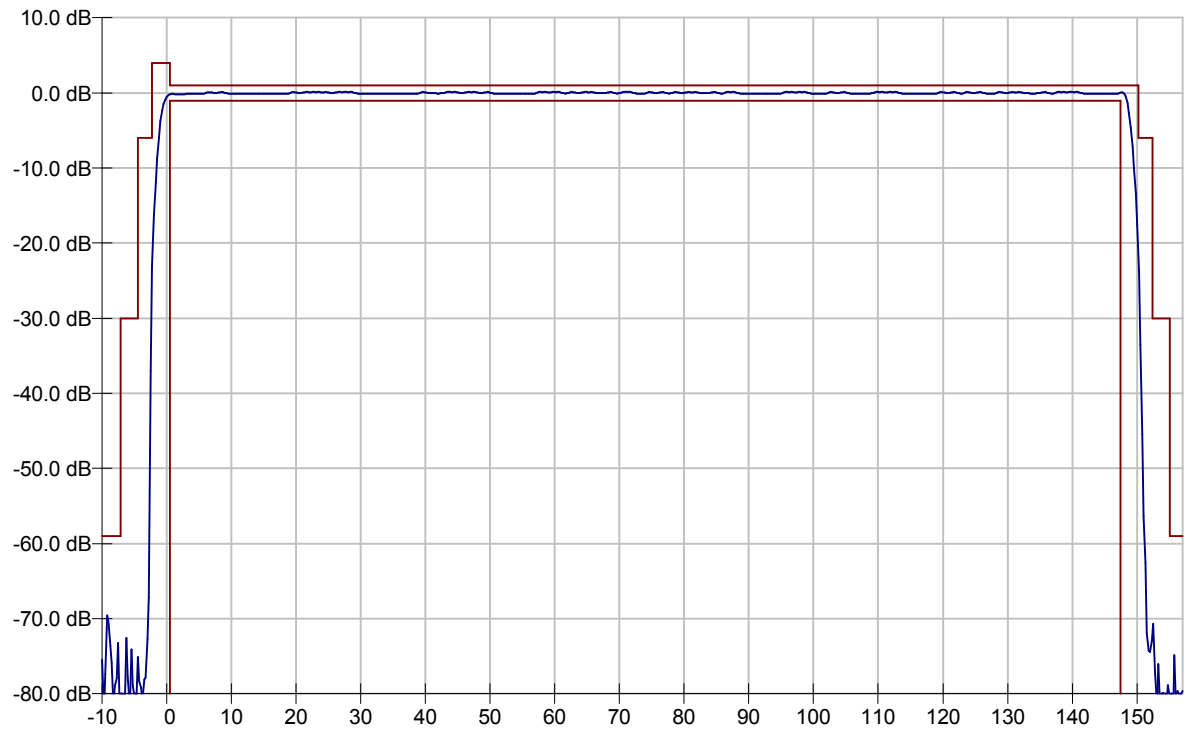
## Annex: Power Graphic

PCL: 8, Channel: 62, Reference Power: 0.0 dBm



## Annex: Power Graphic

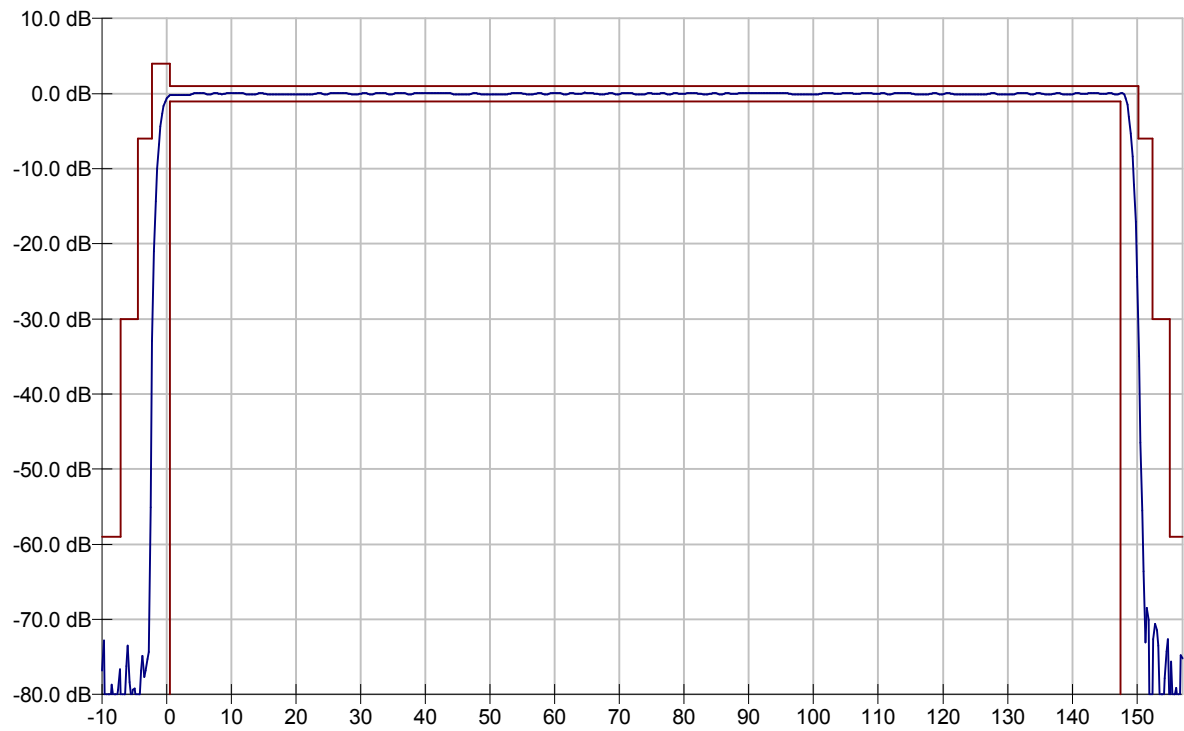
PCL: 9, Channel: 62, Reference Power: 0.0 dBm





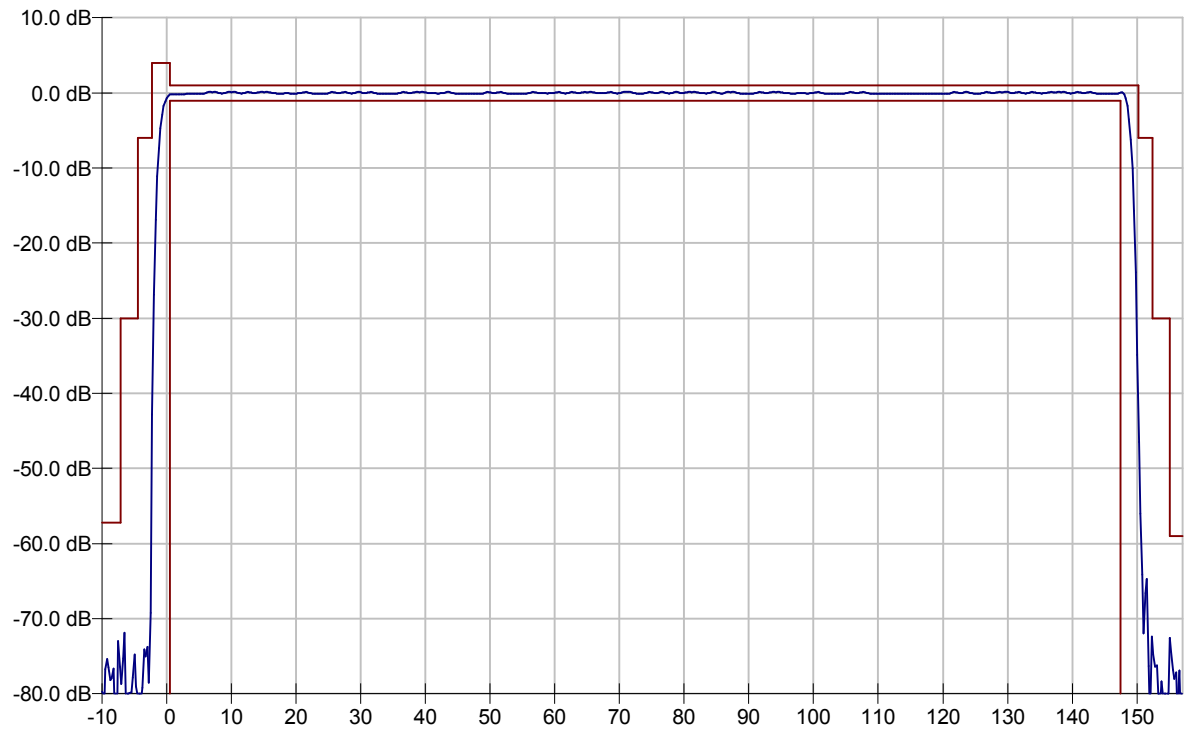
**Annex:** Power Graphic

PCL: 10, Channel: 62, Reference Power: 0.0 dBm



**Annex:** Power Graphic

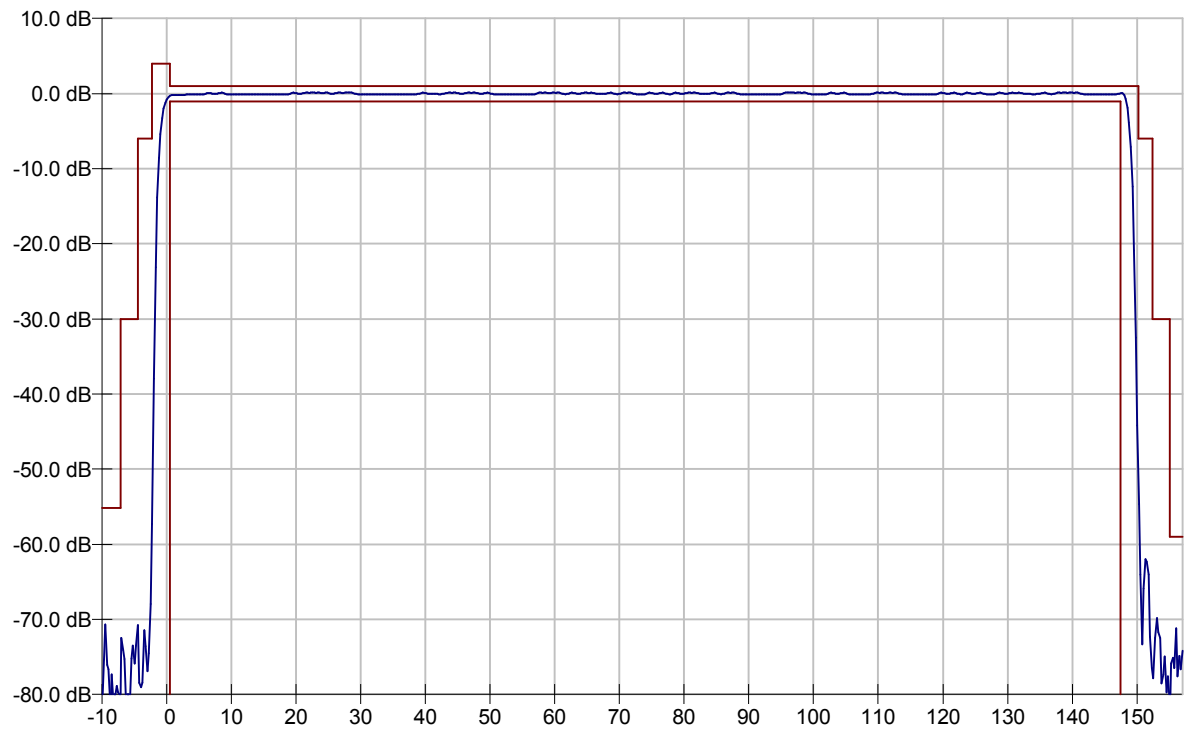
PCL: 11, Channel: 62, Reference Power: 0.0 dBm





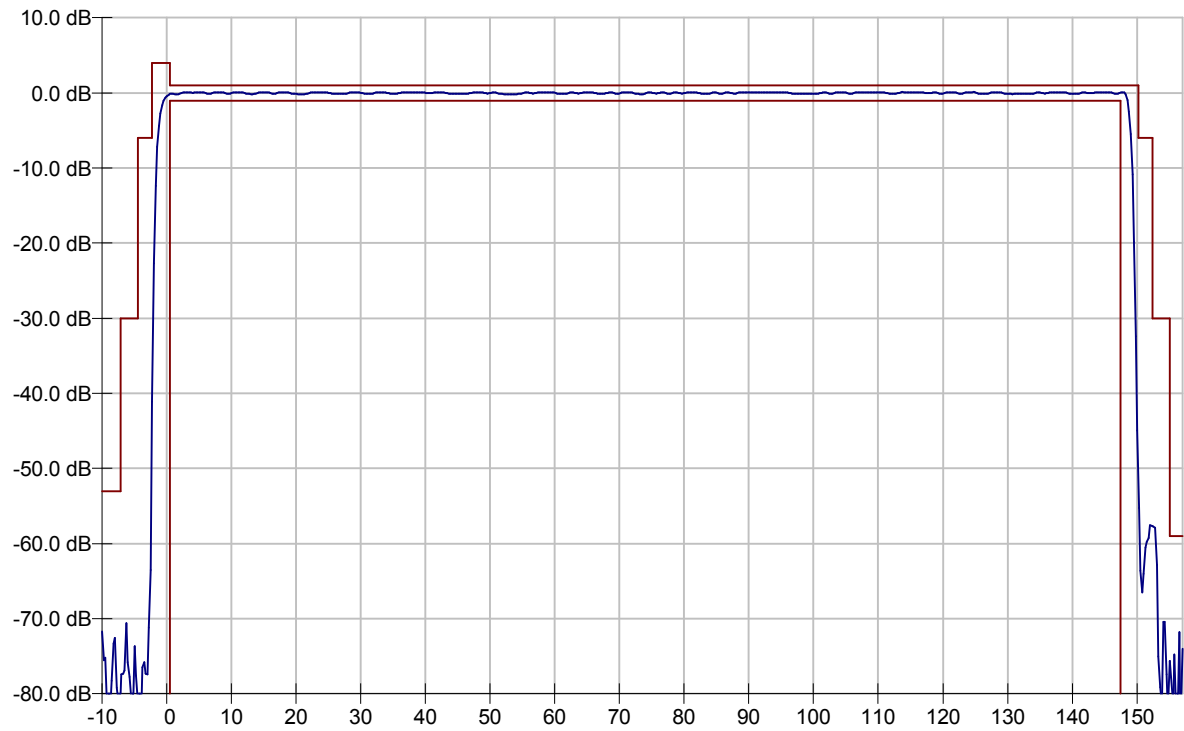
**Annex:** Power Graphic

PCL: 12, Channel: 62, Reference Power: 0.0 dBm



**Annex:** Power Graphic

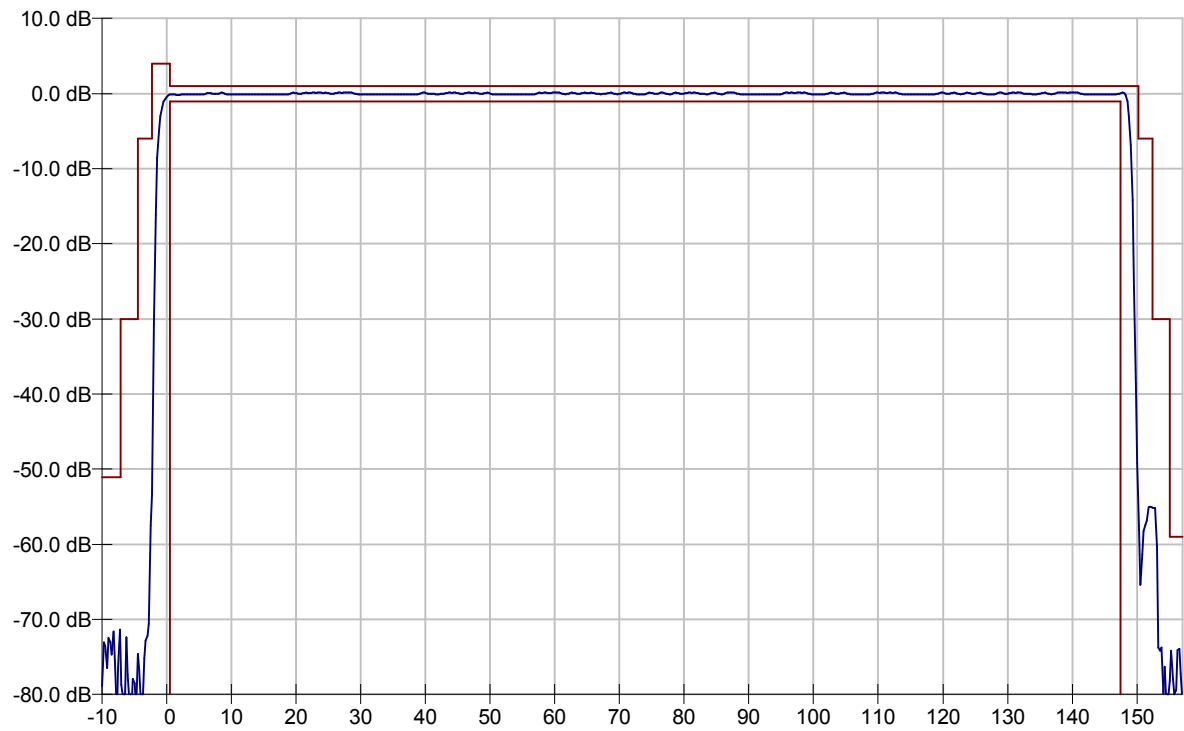
PCL: 13, Channel: 62, Reference Power: 0.0 dBm





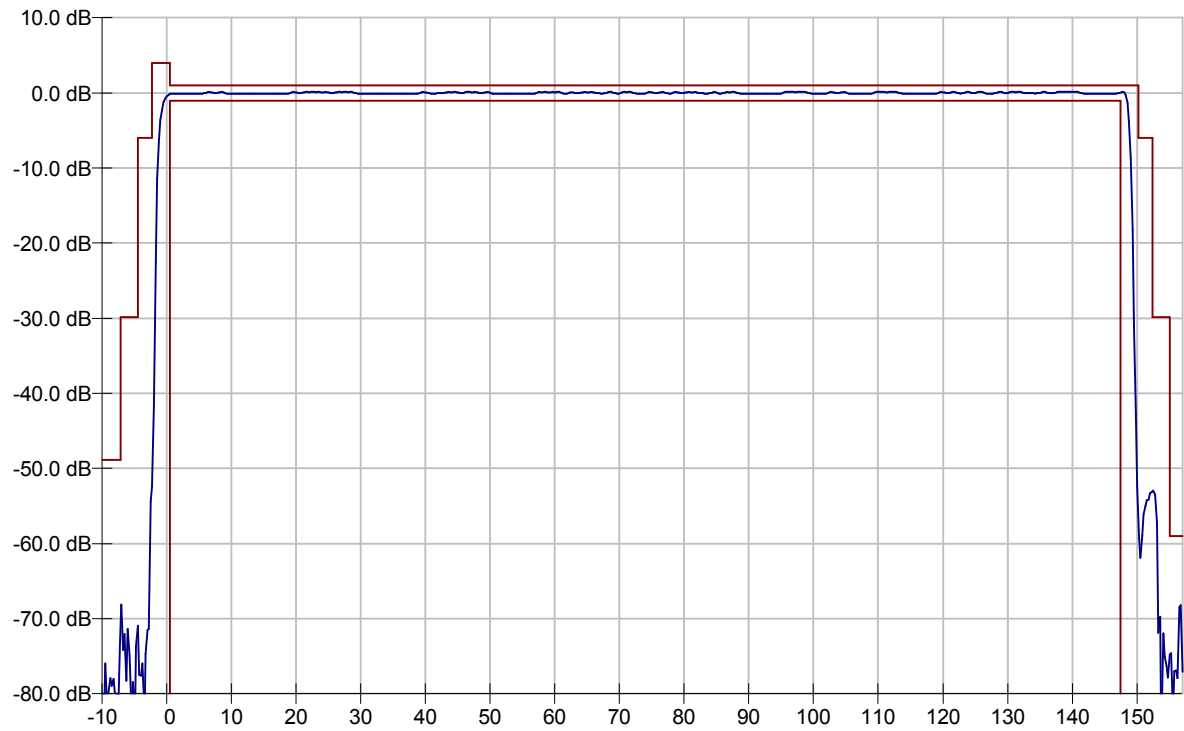
## Annex: Power Graphic

PCL: 14, Channel: 62, Reference Power: 0.0 dBm



## Annex: Power Graphic

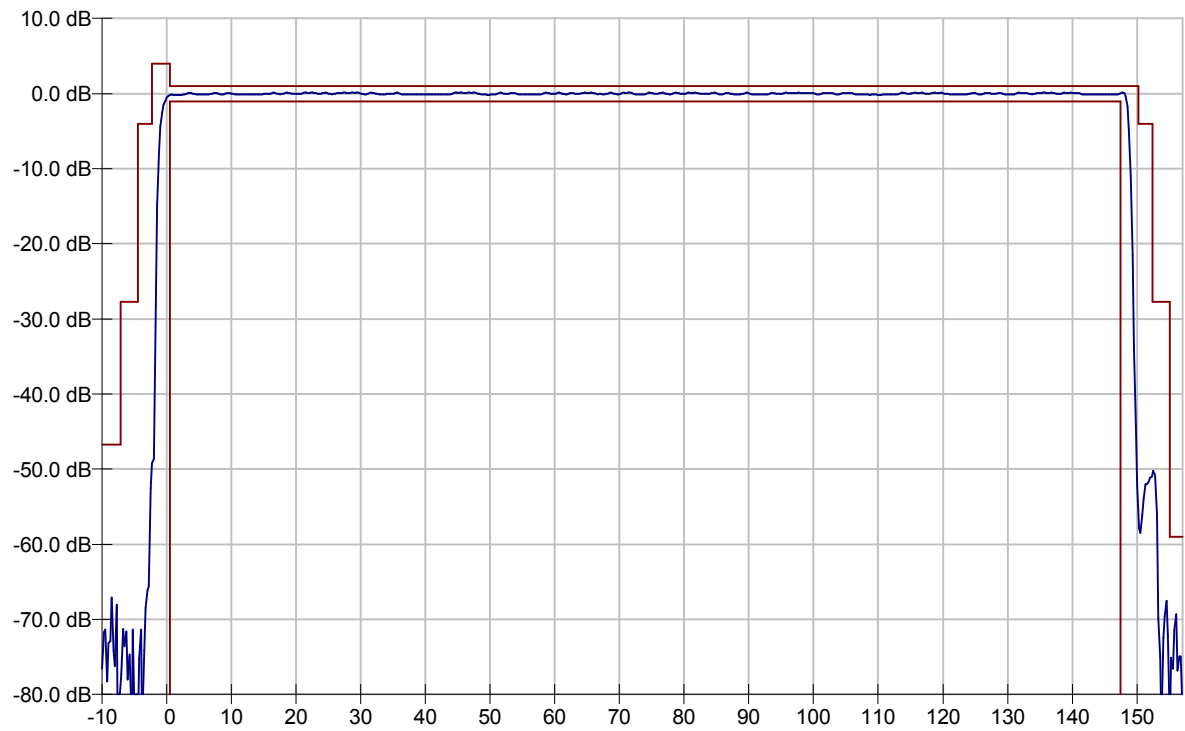
PCL: 15, Channel: 62, Reference Power: 0.0 dBm





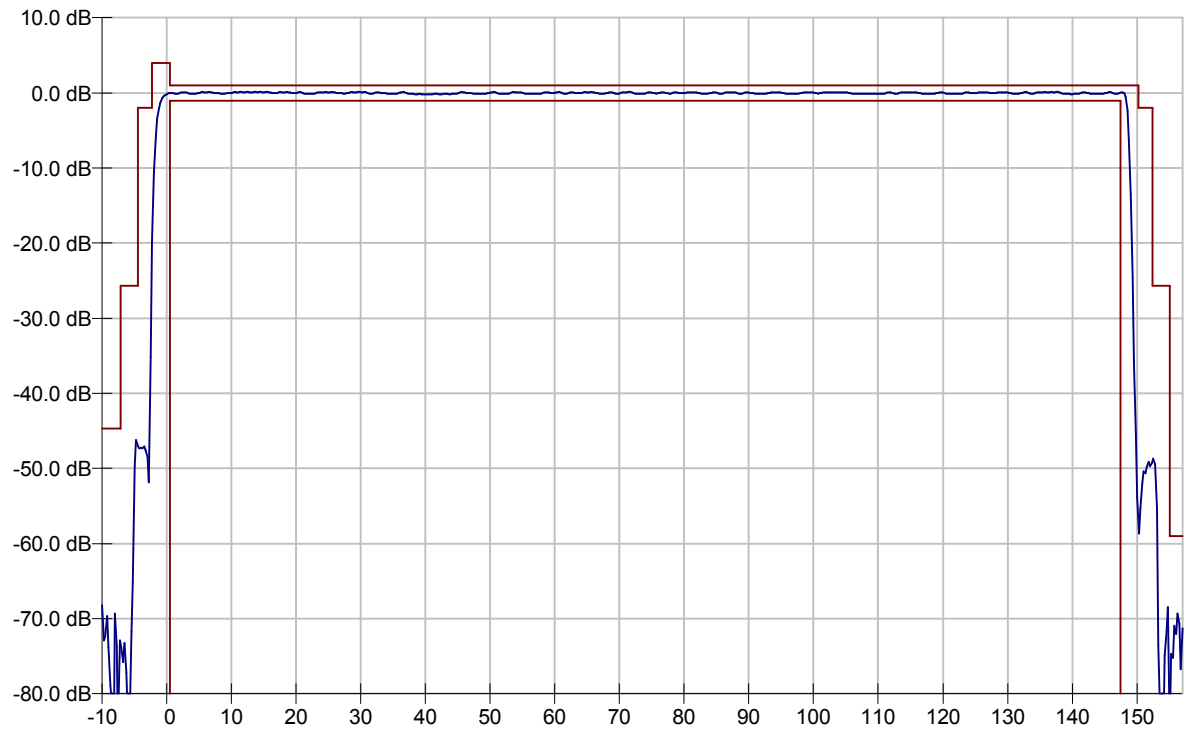
## Annex: Power Graphic

PCL: 16, Channel: 62, Reference Power: 0.0 dBm



## Annex: Power Graphic

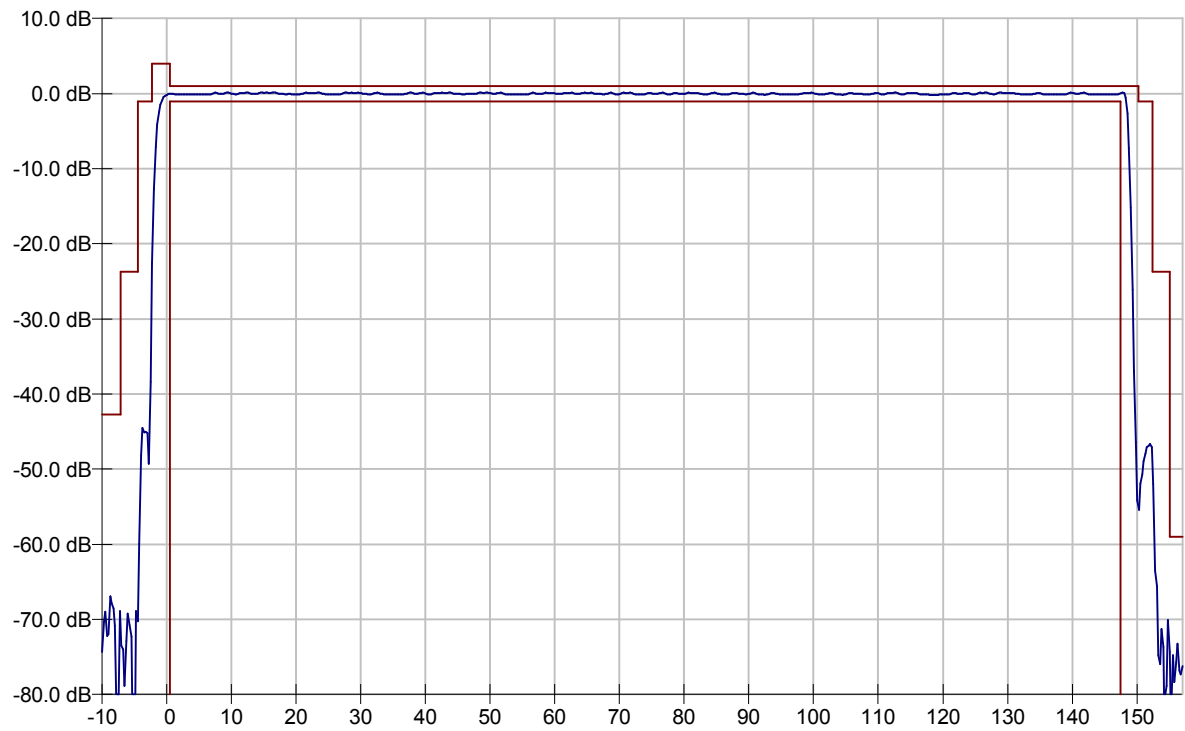
PCL: 17, Channel: 62, Reference Power: 0.0 dBm





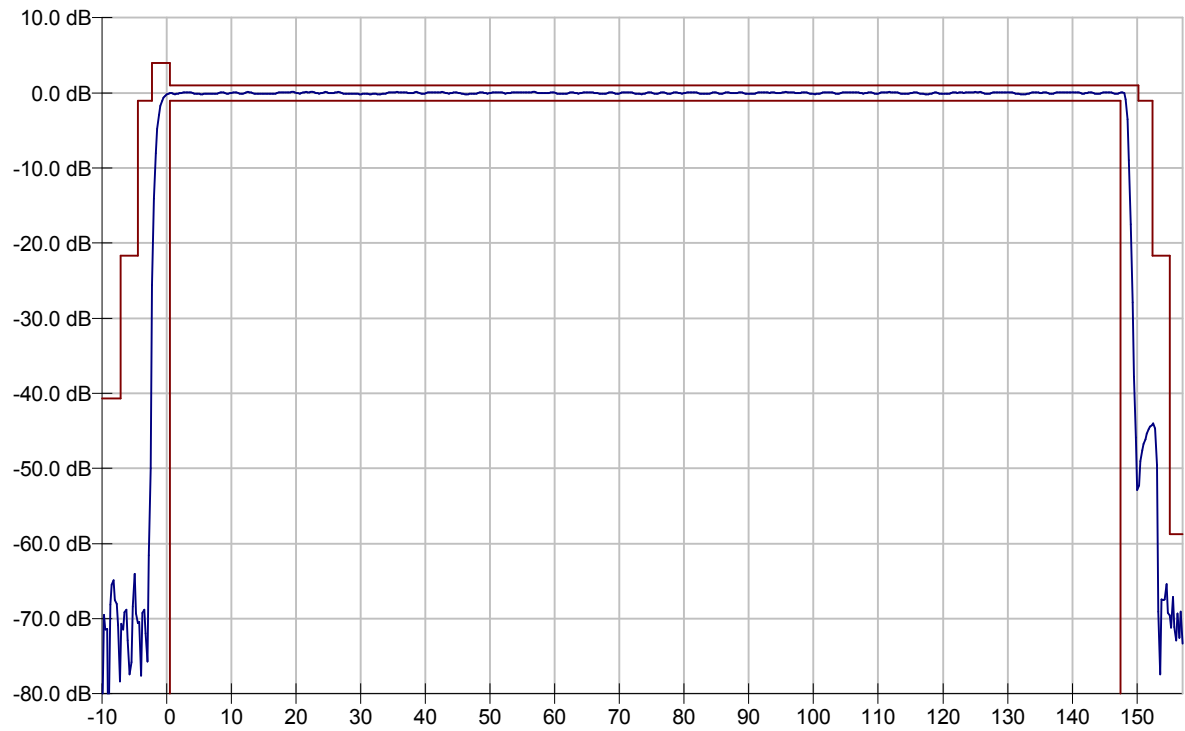
**Annex:** Power Graphic

PCL: 18, Channel: 62, Reference Power: 0.0 dBm



**Annex:** Power Graphic

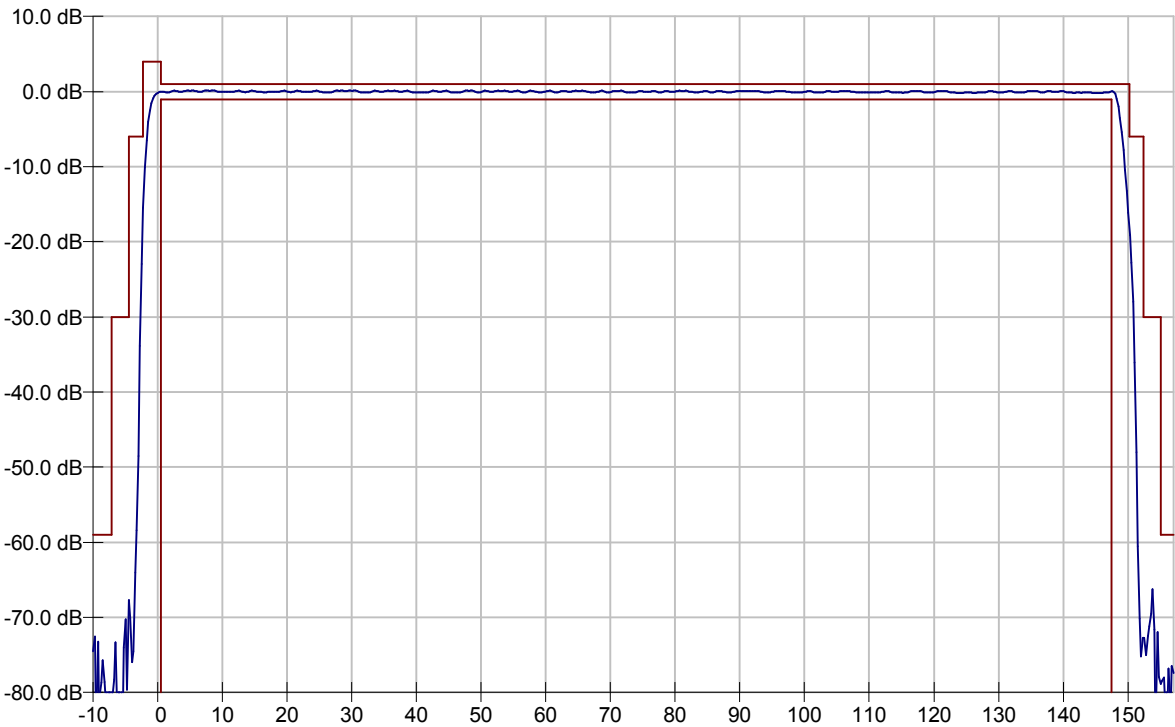
PCL: 19, Channel: 62, Reference Power: 0.0 dBm





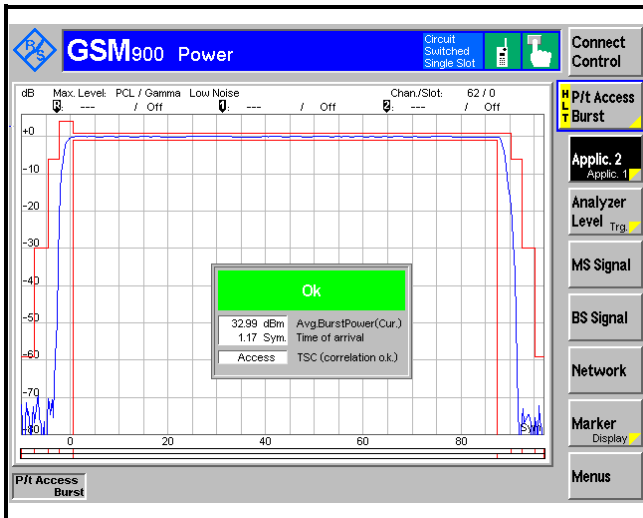
**Annex:**    Power Graphic

PCL: 5, Channel: 124, Reference Power: 0.0 dBm

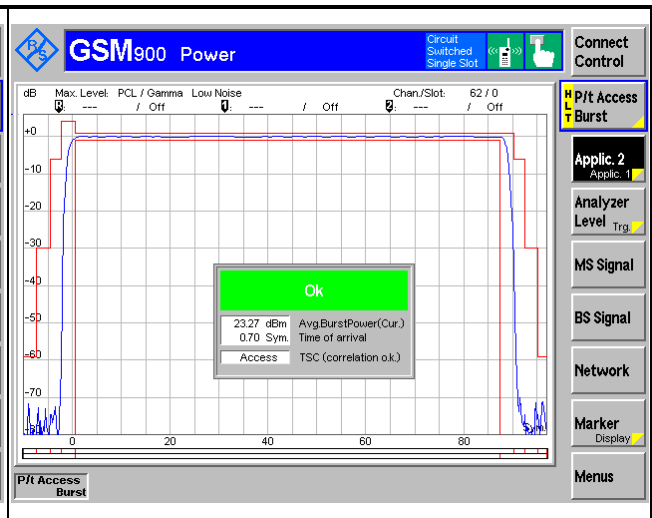


➤ 擷取叢訊功率

NTNV, CH62, PCL 5 擷取叢訊發射機功率圖



NTNV, CH62, PCL 10 擷取叢訊發射機功率圖





## 附錄 B. RF 輸出頻譜

# Measurement Report



ROHDE & SCHWARZ

報告編號: TGON1917-03

Operator: noname

2021年5月27日 上午 10:43:14

CMU Ident: Rohde&Schwarz,CMU 200-1100.0008.02,117995,V5.22

Options: 0,B17,B21Var14,B52Var14,B54Var14,B56Var54,B66,COPROC\_FULLL,B83,B85,B89,B96,PCMCIA,WDDC400,K16  
K17,K20,K21,K22,K23,K24,K27,K28,K29,K42,K43,K56,K57,K58,K59,K60,K61,K62,K63,K64,K65,K66,K67  
K68,K69,K83,K84,K85,K86,K88,K839,K849,K859,K869,FMR6,Intel Celeron Mobil,256 MB  
rxtx1

Sequence: - - -

| Test Name and Condition                                                                                          | Lower Limit | Upper Limit | Measured Value | P/F |
|------------------------------------------------------------------------------------------------------------------|-------------|-------------|----------------|-----|
| Network: GSM 900, BCCH Channel/Level: 62/-60.0 dBm, TCH Channel: 62, TCH Level (dBm): -60.0, Support GSM, PCL: 5 |             |             |                |     |
| (Main) Timeslot: 3, Attenuation (In/Out): 5.1/5.1 dB, Slot Mode: Single Slot, Bitstream: PR9, AuxTX: Off         |             |             |                |     |
| Traffic Mode: Full Rate V1                                                                                       |             |             |                |     |

IMSI: 1. 1.0123456789,Serial: 35462541-076509-9, Revision: PH2P, Number: 111, Traffic: NAN, Power Class: 4

|                          |  |  |        |   |
|--------------------------|--|--|--------|---|
| Call from Mobile:        |  |  | passed | ✓ |
| Keypad Test: (Ref.: 111) |  |  | passed | ✓ |

GSM 900, Channel 62, PCL 5, Timeslot: 3, BS RF Level -102.0 dBm, Attenuation (In/Out) 5.1 dB / 5.1 dB

|                                       |  |  |            |   |
|---------------------------------------|--|--|------------|---|
| Spectrum due to Switching: 20 Bursts  |  |  | passed     | ✓ |
| Spectrum Switching: @ - 1.8 MHz       |  |  | -43.21 dBm |   |
| Spectrum Switching: @ - 1.2 MHz       |  |  | -42.55 dBm |   |
| Spectrum Switching: @ - 0.6 MHz       |  |  | -39.36 dBm |   |
| Spectrum Switching: @ - 0.4 MHz       |  |  | -31.86 dBm |   |
| Spectrum Switching: @ 0.4 MHz         |  |  | -28.49 dBm |   |
| Spectrum Switching: @ 0.6 MHz         |  |  | -38.98 dBm |   |
| Spectrum Switching: @ 1.2 MHz         |  |  | -41.08 dBm |   |
| Spectrum Switching: @ 1.8 MHz         |  |  | -44.35 dBm |   |
| Spectrum due to Modulation: 50 Bursts |  |  | passed     | ✓ |
| Spectrum Modulation: @ - 1.8 MHz      |  |  | -80.79 dBc |   |
| Spectrum Modulation: @ - 1.6 MHz      |  |  | -80.74 dBc |   |
| Spectrum Modulation: @ - 1.4 MHz      |  |  | -79.58 dBc |   |
| Spectrum Modulation: @ - 1.2 MHz      |  |  | -79.54 dBc |   |
| Spectrum Modulation: @ - 1.0 MHz      |  |  | -78.50 dBc |   |
| Spectrum Modulation: @ - 0.8 MHz      |  |  | -77.24 dBc |   |
| Spectrum Modulation: @ - 0.6 MHz      |  |  | -76.24 dBc |   |
| Spectrum Modulation: @ - 0.4 MHz      |  |  | -69.22 dBc |   |
| Spectrum Modulation: @ -0.25 MHz      |  |  | -41.72 dBc |   |
| Spectrum Modulation: @ - 0.2 MHz      |  |  | -36.96 dBc |   |
| Spectrum Modulation: @ -0.1 MHz       |  |  | -8.94 dBc  |   |
| Spectrum Reference Power: @ 0 MHz     |  |  | 25.14 dBm  |   |
| Spectrum Modulation: @ 0.1 MHz        |  |  | -8.72 dBc  |   |
| Spectrum Modulation: @ 0.2 MHz        |  |  | -37.06 dBc |   |
| Spectrum Modulation: @ 0.25 MHz       |  |  | -41.36 dBc |   |
| Spectrum Modulation: @ 0.4 MHz        |  |  | -69.03 dBc |   |
| Spectrum Modulation: @ 0.6 MHz        |  |  | -75.80 dBc |   |
| Spectrum Modulation: @ 0.8 MHz        |  |  | -77.64 dBc |   |
| Spectrum Modulation: @ 1.0 MHz        |  |  | -78.13 dBc |   |
| Spectrum Modulation: @ 1.2 MHz        |  |  | -79.03 dBc |   |
| Spectrum Modulation: @ 1.4 MHz        |  |  | -79.31 dBc |   |
| Spectrum Modulation: @ 1.6 MHz        |  |  | -79.27 dBc |   |
| Spectrum Modulation: @ 1.8 MHz        |  |  | -80.13 dBc |   |

# Measurement Report



ROHDE & SCHWARZ

報告編號：TGON1917-03

| Test Name and Condition                                                                                | Lower Limit | Upper Limit | Measured Value | P/F |
|--------------------------------------------------------------------------------------------------------|-------------|-------------|----------------|-----|
| GSM 900, Channel 1, PCL 5, Timeslot: 3, BS RF Level -102.0 dBm, Attenuation (In/Out) 5.1 dB / 5.1 dB   |             |             |                |     |
| Spectrum due to Switching: 20 Bursts                                                                   |             |             | passed         | ✓   |
| Spectrum Switching: @ - 1.8 MHz                                                                        |             |             | -44.97 dBm     |     |
| Spectrum Switching: @ - 1.2 MHz                                                                        |             |             | -41.68 dBm     |     |
| Spectrum Switching: @ - 0.6 MHz                                                                        |             |             | -39.62 dBm     |     |
| Spectrum Switching: @ - 0.4 MHz                                                                        |             |             | -33.71 dBm     |     |
| Spectrum Switching: @ 0.4 MHz                                                                          |             |             | -28.78 dBm     |     |
| Spectrum Switching: @ 0.6 MHz                                                                          |             |             | -39.30 dBm     |     |
| Spectrum Switching: @ 1.2 MHz                                                                          |             |             | -42.57 dBm     |     |
| Spectrum Switching: @ 1.8 MHz                                                                          |             |             | -43.21 dBm     |     |
| Spectrum due to Modulation: 50 Bursts                                                                  |             |             | passed         | ✓   |
| Spectrum Modulation: @ - 1.8 MHz                                                                       |             |             | -78.34 dBc     |     |
| Spectrum Modulation: @ - 1.6 MHz                                                                       |             |             | -78.28 dBc     |     |
| Spectrum Modulation: @ - 1.4 MHz                                                                       |             |             | -77.19 dBc     |     |
| Spectrum Modulation: @ - 1.2 MHz                                                                       |             |             | -77.16 dBc     |     |
| Spectrum Modulation: @ - 1.0 MHz                                                                       |             |             | -75.81 dBc     |     |
| Spectrum Modulation: @ - 0.8 MHz                                                                       |             |             | -75.97 dBc     |     |
| Spectrum Modulation: @ - 0.6 MHz                                                                       |             |             | -74.45 dBc     |     |
| Spectrum Modulation: @ - 0.4 MHz                                                                       |             |             | -67.42 dBc     |     |
| Spectrum Modulation: @ -0.25 MHz                                                                       |             |             | -41.38 dBc     |     |
| Spectrum Modulation: @ - 0.2 MHz                                                                       |             |             | -34.73 dBc     |     |
| Spectrum Modulation: @ -0.1 MHz                                                                        |             |             | -8.60 dBc      |     |
| Spectrum Reference Power: @ 0 MHz                                                                      |             |             | 22.78 dBm      |     |
| Spectrum Modulation: @ 0.1 MHz                                                                         |             |             | -3.99 dBc      |     |
| Spectrum Modulation: @ 0.2 MHz                                                                         |             |             | -36.66 dBc     |     |
| Spectrum Modulation: @ 0.25 MHz                                                                        |             |             | -39.71 dBc     |     |
| Spectrum Modulation: @ 0.4 MHz                                                                         |             |             | -67.11 dBc     |     |
| Spectrum Modulation: @ 0.6 MHz                                                                         |             |             | -73.78 dBc     |     |
| Spectrum Modulation: @ 0.8 MHz                                                                         |             |             | -74.77 dBc     |     |
| Spectrum Modulation: @ 1.0 MHz                                                                         |             |             | -74.98 dBc     |     |
| Spectrum Modulation: @ 1.2 MHz                                                                         |             |             | -76.62 dBc     |     |
| Spectrum Modulation: @ 1.4 MHz                                                                         |             |             | -76.80 dBc     |     |
| Spectrum Modulation: @ 1.6 MHz                                                                         |             |             | -76.28 dBc     |     |
| Spectrum Modulation: @ 1.8 MHz                                                                         |             |             | -77.76 dBc     |     |
| GSM 900, Channel 124, PCL 5, Timeslot: 3, BS RF Level -102.0 dBm, Attenuation (In/Out) 5.1 dB / 5.1 dB |             |             |                |     |
| Spectrum due to Switching: 20 Bursts                                                                   |             |             | passed         | ✓   |
| Spectrum Switching: @ - 1.8 MHz                                                                        |             |             | -43.95 dBm     |     |
| Spectrum Switching: @ - 1.2 MHz                                                                        |             |             | -42.20 dBm     |     |
| Spectrum Switching: @ - 0.6 MHz                                                                        |             |             | -40.38 dBm     |     |
| Spectrum Switching: @ - 0.4 MHz                                                                        |             |             | -33.70 dBm     |     |
| Spectrum Switching: @ 0.4 MHz                                                                          |             |             | -29.35 dBm     |     |
| Spectrum Switching: @ 0.6 MHz                                                                          |             |             | -40.59 dBm     |     |
| Spectrum Switching: @ 1.2 MHz                                                                          |             |             | -43.55 dBm     |     |
| Spectrum Switching: @ 1.8 MHz                                                                          |             |             | -43.42 dBm     |     |

# Measurement Report

**ROHDE & SCHWARZ**

報告編號：TGON1917-03

| Test Name and Condition               | Lower Limit | Upper Limit | Measured Value | P/F |
|---------------------------------------|-------------|-------------|----------------|-----|
| Spectrum due to Modulation: 50 Bursts |             |             | passed         | ✓   |
| Spectrum Modulation: @ - 1.8 MHz      |             |             | -80.00 dBc     |     |
| Spectrum Modulation: @ - 1.6 MHz      |             |             | -79.26 dBc     |     |
| Spectrum Modulation: @ - 1.4 MHz      |             |             | -78.89 dBc     |     |
| Spectrum Modulation: @ - 1.2 MHz      |             |             | -78.03 dBc     |     |
| Spectrum Modulation: @ - 1.0 MHz      |             |             | -77.12 dBc     |     |
| Spectrum Modulation: @ - 0.8 MHz      |             |             | -76.90 dBc     |     |
| Spectrum Modulation: @ - 0.6 MHz      |             |             | -74.98 dBc     |     |
| Spectrum Modulation: @ - 0.4 MHz      |             |             | -67.75 dBc     |     |
| Spectrum Modulation: @ -0.25 MHz      |             |             | -41.34 dBc     |     |
| Spectrum Modulation: @ - 0.2 MHz      |             |             | -35.92 dBc     |     |
| Spectrum Modulation: @ -0.1 MHz       |             |             | -8.35 dBc      |     |
| Spectrum Reference Power: @ 0 MHz     |             |             | 23.71 dBm      |     |
| Spectrum Modulation: @ 0.1 MHz        |             |             | -6.97 dBc      |     |
| Spectrum Modulation: @ 0.2 MHz        |             |             | -36.40 dBc     |     |
| Spectrum Modulation: @ 0.25 MHz       |             |             | -40.75 dBc     |     |
| Spectrum Modulation: @ 0.4 MHz        |             |             | -68.30 dBc     |     |
| Spectrum Modulation: @ 0.6 MHz        |             |             | -75.19 dBc     |     |
| Spectrum Modulation: @ 0.8 MHz        |             |             | -76.15 dBc     |     |
| Spectrum Modulation: @ 1.0 MHz        |             |             | -77.12 dBc     |     |
| Spectrum Modulation: @ 1.2 MHz        |             |             | -77.88 dBc     |     |
| Spectrum Modulation: @ 1.4 MHz        |             |             | -78.26 dBc     |     |
| Spectrum Modulation: @ 1.6 MHz        |             |             | -77.86 dBc     |     |
| Spectrum Modulation: @ 1.8 MHz        |             |             | -78.69 dBc     |     |

*GSM 900, Channel 62, PCL 7, Timeslot: 3, BS RF Level -85.0 dBm, Attenuation (In/Out) 5.1 dB / 5.1 dB, Meas. Slot: 3**Decoding for modulation: Standard, BER Synch time: 0.20 s*

|                                                      |  |  |            |   |
|------------------------------------------------------|--|--|------------|---|
| Spectrum due to Switching: Reference Power: 21.6 dBm |  |  | passed     | ✓ |
| Spectrum Switching: @ - 1.8 MHz                      |  |  | -48.03 dBm |   |
| Spectrum Switching: @ - 1.2 MHz                      |  |  | -46.72 dBm |   |
| Spectrum Switching: @ - 0.6 MHz                      |  |  | -35.92 dBm |   |
| Spectrum Switching: @ - 0.4 MHz                      |  |  | -32.44 dBm |   |
| Spectrum Switching: @ 0.4 MHz                        |  |  | -29.55 dBm |   |
| Spectrum Switching: @ 0.6 MHz                        |  |  | -33.67 dBm |   |
| Spectrum Switching: @ 1.2 MHz                        |  |  | -45.20 dBm |   |
| Spectrum Switching: @ 1.8 MHz                        |  |  | -48.32 dBm |   |
| Spectrum Switching: @ -1.40 MHz                      |  |  | -48.31 dBm |   |
| Spectrum Switching: @ -0.80 MHz                      |  |  | -38.91 dBm |   |
| Spectrum Switching: @ 0.80 MHz                       |  |  | -39.85 dBm |   |
| Spectrum Switching: @ 1.40 MHz                       |  |  | -47.10 dBm |   |

# Measurement Report



ROHDE & SCHWARZ

報告編號：TGON1917-03

| Test Name and Condition           | Lower Limit | Upper Limit | Measured Value | P/F |
|-----------------------------------|-------------|-------------|----------------|-----|
| Spectrum due to Modulation:       |             |             | passed         | ✓   |
| Spectrum Modulation: @ - 1.8 MHz  |             |             | -80.28 dBc     |     |
| Spectrum Modulation: @ - 1.6 MHz  |             |             | -80.77 dBc     |     |
| Spectrum Modulation: @ - 1.4 MHz  |             |             | -80.68 dBc     |     |
| Spectrum Modulation: @ - 1.2 MHz  |             |             | -79.12 dBc     |     |
| Spectrum Modulation: @ - 1.0 MHz  |             |             | -78.86 dBc     |     |
| Spectrum Modulation: @ - 0.8 MHz  |             |             | -76.97 dBc     |     |
| Spectrum Modulation: @ - 0.6 MHz  |             |             | -75.72 dBc     |     |
| Spectrum Modulation: @ - 0.4 MHz  |             |             | -69.40 dBc     |     |
| Spectrum Modulation: @ -0.25 MHz  |             |             | -42.17 dBc     |     |
| Spectrum Modulation: @ - 0.2 MHz  |             |             | -36.85 dBc     |     |
| Spectrum Modulation: @ -0.1 MHz   |             |             | -9.69 dBc      |     |
| Spectrum Reference Power: @ 0 MHz |             |             | 21.64 dBm      |     |
| Spectrum Modulation: @ 0.1 MHz    |             |             | -8.74 dBc      |     |
| Spectrum Modulation: @ 0.2 MHz    |             |             | -36.97 dBc     |     |
| Spectrum Modulation: @ 0.25 MHz   |             |             | -41.39 dBc     |     |
| Spectrum Modulation: @ 0.4 MHz    |             |             | -69.36 dBc     |     |
| Spectrum Modulation: @ 0.6 MHz    |             |             | -76.26 dBc     |     |
| Spectrum Modulation: @ 0.8 MHz    |             |             | -76.56 dBc     |     |
| Spectrum Modulation: @ 1.0 MHz    |             |             | -78.87 dBc     |     |
| Spectrum Modulation: @ 1.2 MHz    |             |             | -80.21 dBc     |     |
| Spectrum Modulation: @ 1.4 MHz    |             |             | -80.19 dBc     |     |
| Spectrum Modulation: @ 1.6 MHz    |             |             | -79.26 dBc     |     |
| Spectrum Modulation: @ 1.8 MHz    |             |             | -80.49 dBc     |     |
| Spectrum Modulation: @ -1.40 MHz  |             |             | -80.68 dBc     |     |
| Spectrum Modulation: @ -0.80 MHz  |             |             | -76.97 dBc     |     |
| Spectrum Modulation: @ 0.80 MHz   |             |             | -76.56 dBc     |     |
| Spectrum Modulation: @ 1.40 MHz   |             |             | -80.19 dBc     |     |

GSM 900, Channel 1, PCL 11, Timeslot: 3, BS RF Level -85.0 dBm, Attenuation (In/Out) 5.1 dB / 5.1 dB, Meas. Slot: 3

Decoding for modulation: Standard, BER Synch time: 0.20 s

|                                                      |  |  |            |   |
|------------------------------------------------------|--|--|------------|---|
| Spectrum due to Switching: Reference Power: 12.5 dBm |  |  | passed     | ✓ |
| Spectrum Switching: @ - 1.8 MHz                      |  |  | -56.12 dBm |   |
| Spectrum Switching: @ - 1.2 MHz                      |  |  | -55.22 dBm |   |
| Spectrum Switching: @ - 0.6 MHz                      |  |  | -51.21 dBm |   |
| Spectrum Switching: @ - 0.4 MHz                      |  |  | -41.84 dBm |   |
| Spectrum Switching: @ 0.4 MHz                        |  |  | -40.45 dBm |   |
| Spectrum Switching: @ 0.6 MHz                        |  |  | -49.38 dBm |   |
| Spectrum Switching: @ 1.2 MHz                        |  |  | -52.71 dBm |   |
| Spectrum Switching: @ 1.8 MHz                        |  |  | -56.19 dBm |   |
| Spectrum Switching: @ -1.60 MHz                      |  |  | -56.35 dBm |   |
| Spectrum Switching: @ -1.40 MHz                      |  |  | -56.60 dBm |   |
| Spectrum Switching: @ -1.00 MHz                      |  |  | -53.15 dBm |   |
| Spectrum Switching: @ -0.80 MHz                      |  |  | -50.76 dBm |   |
| Spectrum Switching: @ 0.80 MHz                       |  |  | -51.19 dBm |   |
| Spectrum Switching: @ 1.00 MHz                       |  |  | -53.39 dBm |   |
| Spectrum Switching: @ 1.40 MHz                       |  |  | -54.26 dBm |   |
| Spectrum Switching: @ 1.60 MHz                       |  |  | -55.66 dBm |   |

# Measurement Report



ROHDE & SCHWARZ

報告編號：TGON1917-03

| Test Name and Condition           | Lower Limit | Upper Limit | Measured Value | P/F |
|-----------------------------------|-------------|-------------|----------------|-----|
| Spectrum due to Modulation:       |             |             | passed         | ✓   |
| Spectrum Modulation: @ - 1.8 MHz  |             |             | -79.55 dBc     |     |
| Spectrum Modulation: @ - 1.6 MHz  |             |             | -79.66 dBc     |     |
| Spectrum Modulation: @ - 1.4 MHz  |             |             | -78.91 dBc     |     |
| Spectrum Modulation: @ - 1.2 MHz  |             |             | -77.98 dBc     |     |
| Spectrum Modulation: @ - 1.0 MHz  |             |             | -75.96 dBc     |     |
| Spectrum Modulation: @ - 0.8 MHz  |             |             | -74.58 dBc     |     |
| Spectrum Modulation: @ - 0.6 MHz  |             |             | -74.66 dBc     |     |
| Spectrum Modulation: @ - 0.4 MHz  |             |             | -67.85 dBc     |     |
| Spectrum Modulation: @ -0.25 MHz  |             |             | -39.28 dBc     |     |
| Spectrum Modulation: @ - 0.2 MHz  |             |             | -36.30 dBc     |     |
| Spectrum Modulation: @ -0.1 MHz   |             |             | -9.17 dBc      |     |
| Spectrum Reference Power: @ 0 MHz |             |             | 12.49 dBm      |     |
| Spectrum Modulation: @ 0.1 MHz    |             |             | -6.50 dBc      |     |
| Spectrum Modulation: @ 0.2 MHz    |             |             | -36.21 dBc     |     |
| Spectrum Modulation: @ 0.25 MHz   |             |             | -41.05 dBc     |     |
| Spectrum Modulation: @ 0.4 MHz    |             |             | -67.19 dBc     |     |
| Spectrum Modulation: @ 0.6 MHz    |             |             | -74.43 dBc     |     |
| Spectrum Modulation: @ 0.8 MHz    |             |             | -74.41 dBc     |     |
| Spectrum Modulation: @ 1.0 MHz    |             |             | -76.88 dBc     |     |
| Spectrum Modulation: @ 1.2 MHz    |             |             | -78.47 dBc     |     |
| Spectrum Modulation: @ 1.4 MHz    |             |             | -77.89 dBc     |     |
| Spectrum Modulation: @ 1.6 MHz    |             |             | -78.38 dBc     |     |
| Spectrum Modulation: @ 1.8 MHz    |             |             | -80.31 dBc     |     |
| Spectrum Modulation: @ -1.60 MHz  |             |             | -79.66 dBc     |     |
| Spectrum Modulation: @ -1.40 MHz  |             |             | -78.91 dBc     |     |
| Spectrum Modulation: @ -1.00 MHz  |             |             | -75.96 dBc     |     |
| Spectrum Modulation: @ -0.80 MHz  |             |             | -74.58 dBc     |     |
| Spectrum Modulation: @ 0.80 MHz   |             |             | -74.41 dBc     |     |
| Spectrum Modulation: @ 1.00 MHz   |             |             | -76.88 dBc     |     |
| Spectrum Modulation: @ 1.40 MHz   |             |             | -77.89 dBc     |     |
| Spectrum Modulation: @ 1.60 MHz   |             |             | -78.38 dBc     |     |

GSM 900, Channel 62, PCL 11, Timeslot: 3, BS RF Level -85.0 dBm, Attenuation (In/Out) 5.1 dB / 5.1 dB, Meas. Slot: 3

Decoding for modulation: Standard, BER Synch time: 0.20 s

# Measurement Report



ROHDE & SCHWARZ

報告編號：TGON1917-03

| Test Name and Condition                              | Lower Limit | Upper Limit | Measured Value | P/F |
|------------------------------------------------------|-------------|-------------|----------------|-----|
| Spectrum due to Switching: Reference Power: 11.8 dBm |             |             | passed         | ✓   |
| Spectrum Switching: @ - 1.8 MHz                      |             |             | -57.96 dBm     |     |
| Spectrum Switching: @ - 1.2 MHz                      |             |             | -55.08 dBm     |     |
| Spectrum Switching: @ - 0.6 MHz                      |             |             | -50.87 dBm     |     |
| Spectrum Switching: @ - 0.4 MHz                      |             |             | -41.72 dBm     |     |
| Spectrum Switching: @ 0.4 MHz                        |             |             | -40.38 dBm     |     |
| Spectrum Switching: @ 0.6 MHz                        |             |             | -49.47 dBm     |     |
| Spectrum Switching: @ 1.2 MHz                        |             |             | -53.91 dBm     |     |
| Spectrum Switching: @ 1.8 MHz                        |             |             | -56.24 dBm     |     |
| Spectrum Switching: @ -1.60 MHz                      |             |             | -56.40 dBm     |     |
| Spectrum Switching: @ -1.40 MHz                      |             |             | -55.46 dBm     |     |
| Spectrum Switching: @ -1.00 MHz                      |             |             | -53.28 dBm     |     |
| Spectrum Switching: @ -0.80 MHz                      |             |             | -51.80 dBm     |     |
| Spectrum Switching: @ 0.80 MHz                       |             |             | -51.73 dBm     |     |
| Spectrum Switching: @ 1.00 MHz                       |             |             | -53.37 dBm     |     |
| Spectrum Switching: @ 1.40 MHz                       |             |             | -55.18 dBm     |     |
| Spectrum Switching: @ 1.60 MHz                       |             |             | -54.09 dBm     |     |

# Measurement Report



ROHDE & SCHWARZ

報告編號：TGON1917-03

| Test Name and Condition           | Lower Limit | Upper Limit | Measured Value | P/F |
|-----------------------------------|-------------|-------------|----------------|-----|
| Spectrum due to Modulation:       |             |             | passed         | ✓   |
| Spectrum Modulation: @ - 1.8 MHz  |             |             | -80.26 dBc     |     |
| Spectrum Modulation: @ - 1.6 MHz  |             |             | -78.41 dBc     |     |
| Spectrum Modulation: @ - 1.4 MHz  |             |             | -78.32 dBc     |     |
| Spectrum Modulation: @ - 1.2 MHz  |             |             | -76.86 dBc     |     |
| Spectrum Modulation: @ - 1.0 MHz  |             |             | -76.12 dBc     |     |
| Spectrum Modulation: @ - 0.8 MHz  |             |             | -74.40 dBc     |     |
| Spectrum Modulation: @ - 0.6 MHz  |             |             | -74.23 dBc     |     |
| Spectrum Modulation: @ - 0.4 MHz  |             |             | -67.51 dBc     |     |
| Spectrum Modulation: @ -0.25 MHz  |             |             | -37.30 dBc     |     |
| Spectrum Modulation: @ - 0.2 MHz  |             |             | -34.74 dBc     |     |
| Spectrum Modulation: @ -0.1 MHz   |             |             | -7.14 dBc      |     |
| Spectrum Reference Power: @ 0 MHz |             |             | 11.84 dBm      |     |
| Spectrum Modulation: @ 0.1 MHz    |             |             | -3.71 dBc      |     |
| Spectrum Modulation: @ 0.2 MHz    |             |             | -36.11 dBc     |     |
| Spectrum Modulation: @ 0.25 MHz   |             |             | -38.62 dBc     |     |
| Spectrum Modulation: @ 0.4 MHz    |             |             | -67.72 dBc     |     |
| Spectrum Modulation: @ 0.6 MHz    |             |             | -73.35 dBc     |     |
| Spectrum Modulation: @ 0.8 MHz    |             |             | -72.79 dBc     |     |
| Spectrum Modulation: @ 1.0 MHz    |             |             | -75.35 dBc     |     |
| Spectrum Modulation: @ 1.2 MHz    |             |             | -77.21 dBc     |     |
| Spectrum Modulation: @ 1.4 MHz    |             |             | -77.42 dBc     |     |
| Spectrum Modulation: @ 1.6 MHz    |             |             | -77.88 dBc     |     |
| Spectrum Modulation: @ 1.8 MHz    |             |             | -78.38 dBc     |     |
| Spectrum Modulation: @ -1.60 MHz  |             |             | -78.41 dBc     |     |
| Spectrum Modulation: @ -1.40 MHz  |             |             | -78.32 dBc     |     |
| Spectrum Modulation: @ -1.00 MHz  |             |             | -76.12 dBc     |     |
| Spectrum Modulation: @ -0.80 MHz  |             |             | -74.40 dBc     |     |
| Spectrum Modulation: @ 0.80 MHz   |             |             | -72.79 dBc     |     |
| Spectrum Modulation: @ 1.00 MHz   |             |             | -75.35 dBc     |     |
| Spectrum Modulation: @ 1.40 MHz   |             |             | -77.42 dBc     |     |
| Spectrum Modulation: @ 1.60 MHz   |             |             | -77.88 dBc     |     |

GSM 900, Channel 124, PCL 11, Timeslot: 3, BS RF Level -85.0 dBm, Attenuation (In/Out) 5.1 dB / 5.1 dB, Meas. Slot: 3

Decoding for modulation: Standard, BER Synch time: 0.20 s

# Measurement Report



ROHDE & SCHWARZ

報告編號：TGON1917-03

| Test Name and Condition                              | Lower Limit | Upper Limit | Measured Value | P/F |
|------------------------------------------------------|-------------|-------------|----------------|-----|
| Spectrum due to Switching: Reference Power: 11.1 dBm |             |             | passed         | ✓   |
| Spectrum Switching: @ - 1.8 MHz                      |             |             | -56.56 dBm     |     |
| Spectrum Switching: @ - 1.2 MHz                      |             |             | -54.90 dBm     |     |
| Spectrum Switching: @ - 0.6 MHz                      |             |             | -52.41 dBm     |     |
| Spectrum Switching: @ - 0.4 MHz                      |             |             | -41.52 dBm     |     |
| Spectrum Switching: @ 0.4 MHz                        |             |             | -42.29 dBm     |     |
| Spectrum Switching: @ 0.6 MHz                        |             |             | -49.68 dBm     |     |
| Spectrum Switching: @ 1.2 MHz                        |             |             | -53.73 dBm     |     |
| Spectrum Switching: @ 1.8 MHz                        |             |             | -54.67 dBm     |     |
| Spectrum Switching: @ -1.60 MHz                      |             |             | -57.22 dBm     |     |
| Spectrum Switching: @ -1.40 MHz                      |             |             | -55.97 dBm     |     |
| Spectrum Switching: @ -1.00 MHz                      |             |             | -51.27 dBm     |     |
| Spectrum Switching: @ -0.80 MHz                      |             |             | -51.42 dBm     |     |
| Spectrum Switching: @ 0.80 MHz                       |             |             | -48.49 dBm     |     |
| Spectrum Switching: @ 1.00 MHz                       |             |             | -54.50 dBm     |     |
| Spectrum Switching: @ 1.40 MHz                       |             |             | -56.05 dBm     |     |
| Spectrum Switching: @ 1.60 MHz                       |             |             | -55.88 dBm     |     |

# Measurement Report



ROHDE & SCHWARZ

報告編號：TGON1917-03

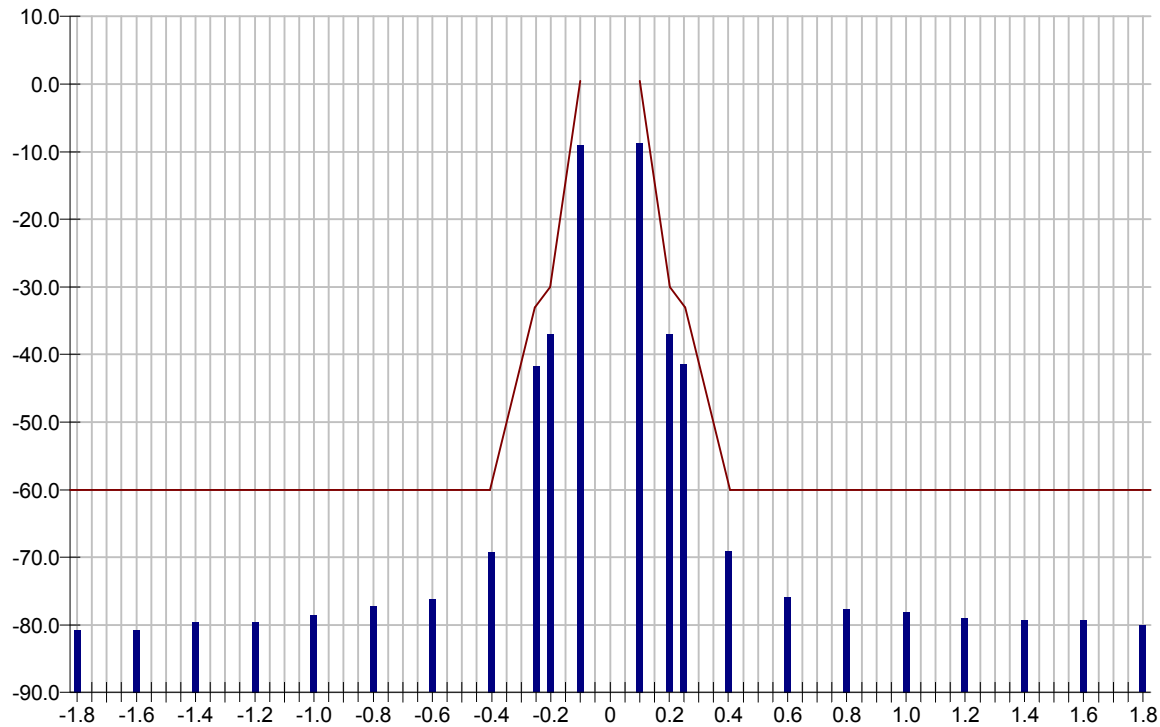
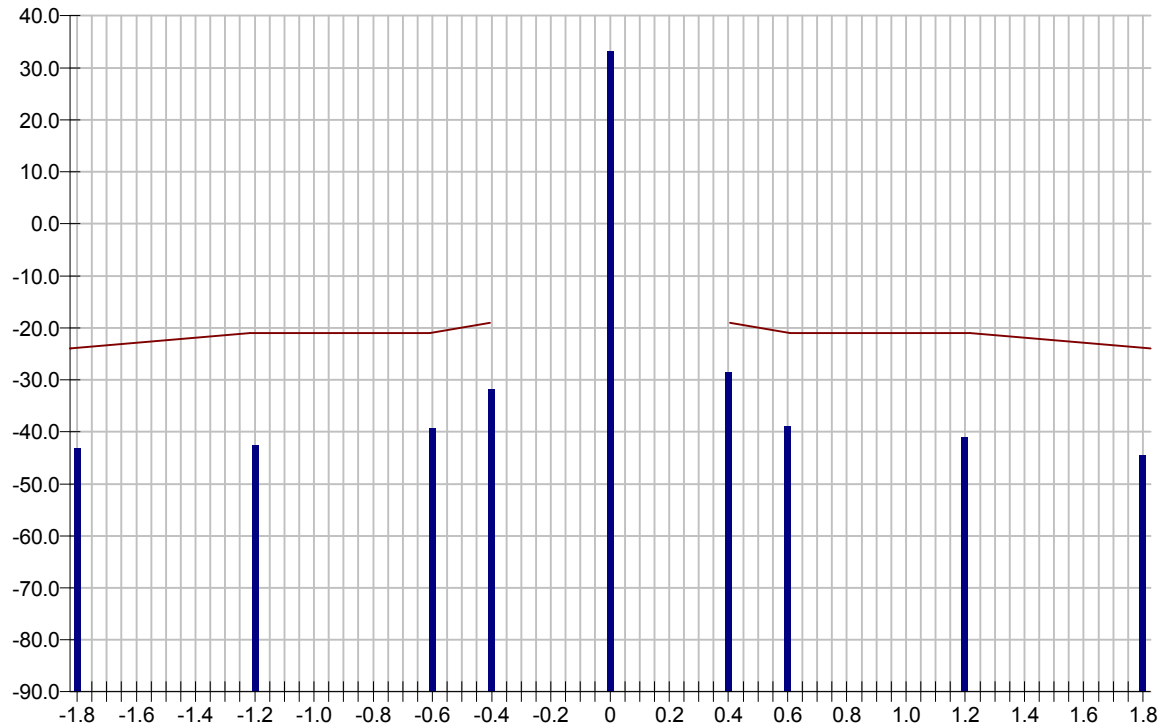
| Test Name and Condition           | Lower Limit | Upper Limit | Measured Value | P/F |
|-----------------------------------|-------------|-------------|----------------|-----|
| Spectrum due to Modulation:       |             |             | passed         | ✓   |
| Spectrum Modulation: @ - 1.8 MHz  |             |             | -79.44 dBc     |     |
| Spectrum Modulation: @ - 1.6 MHz  |             |             | -78.19 dBc     |     |
| Spectrum Modulation: @ - 1.4 MHz  |             |             | -77.55 dBc     |     |
| Spectrum Modulation: @ - 1.2 MHz  |             |             | -76.39 dBc     |     |
| Spectrum Modulation: @ - 1.0 MHz  |             |             | -75.09 dBc     |     |
| Spectrum Modulation: @ - 0.8 MHz  |             |             | -74.06 dBc     |     |
| Spectrum Modulation: @ - 0.6 MHz  |             |             | -74.59 dBc     |     |
| Spectrum Modulation: @ - 0.4 MHz  |             |             | -67.34 dBc     |     |
| Spectrum Modulation: @ -0.25 MHz  |             |             | -40.96 dBc     |     |
| Spectrum Modulation: @ - 0.2 MHz  |             |             | -34.57 dBc     |     |
| Spectrum Modulation: @ -0.1 MHz   |             |             | -7.81 dBc      |     |
| Spectrum Reference Power: @ 0 MHz |             |             | 11.12 dBm      |     |
| Spectrum Modulation: @ 0.1 MHz    |             |             | -3.98 dBc      |     |
| Spectrum Modulation: @ 0.2 MHz    |             |             | -36.49 dBc     |     |
| Spectrum Modulation: @ 0.25 MHz   |             |             | -39.38 dBc     |     |
| Spectrum Modulation: @ 0.4 MHz    |             |             | -66.52 dBc     |     |
| Spectrum Modulation: @ 0.6 MHz    |             |             | -72.85 dBc     |     |
| Spectrum Modulation: @ 0.8 MHz    |             |             | -73.08 dBc     |     |
| Spectrum Modulation: @ 1.0 MHz    |             |             | -75.84 dBc     |     |
| Spectrum Modulation: @ 1.2 MHz    |             |             | -75.34 dBc     |     |
| Spectrum Modulation: @ 1.4 MHz    |             |             | -76.96 dBc     |     |
| Spectrum Modulation: @ 1.6 MHz    |             |             | -76.59 dBc     |     |
| Spectrum Modulation: @ 1.8 MHz    |             |             | -78.00 dBc     |     |
| Spectrum Modulation: @ -1.60 MHz  |             |             | -78.19 dBc     |     |
| Spectrum Modulation: @ -1.40 MHz  |             |             | -77.55 dBc     |     |
| Spectrum Modulation: @ -1.00 MHz  |             |             | -75.09 dBc     |     |
| Spectrum Modulation: @ -0.80 MHz  |             |             | -74.06 dBc     |     |
| Spectrum Modulation: @ 0.80 MHz   |             |             | -73.08 dBc     |     |
| Spectrum Modulation: @ 1.00 MHz   |             |             | -75.84 dBc     |     |
| Spectrum Modulation: @ 1.40 MHz   |             |             | -76.96 dBc     |     |
| Spectrum Modulation: @ 1.60 MHz   |             |             | -76.59 dBc     |     |
| Call Release Test:                |             |             | passed         | ✓   |

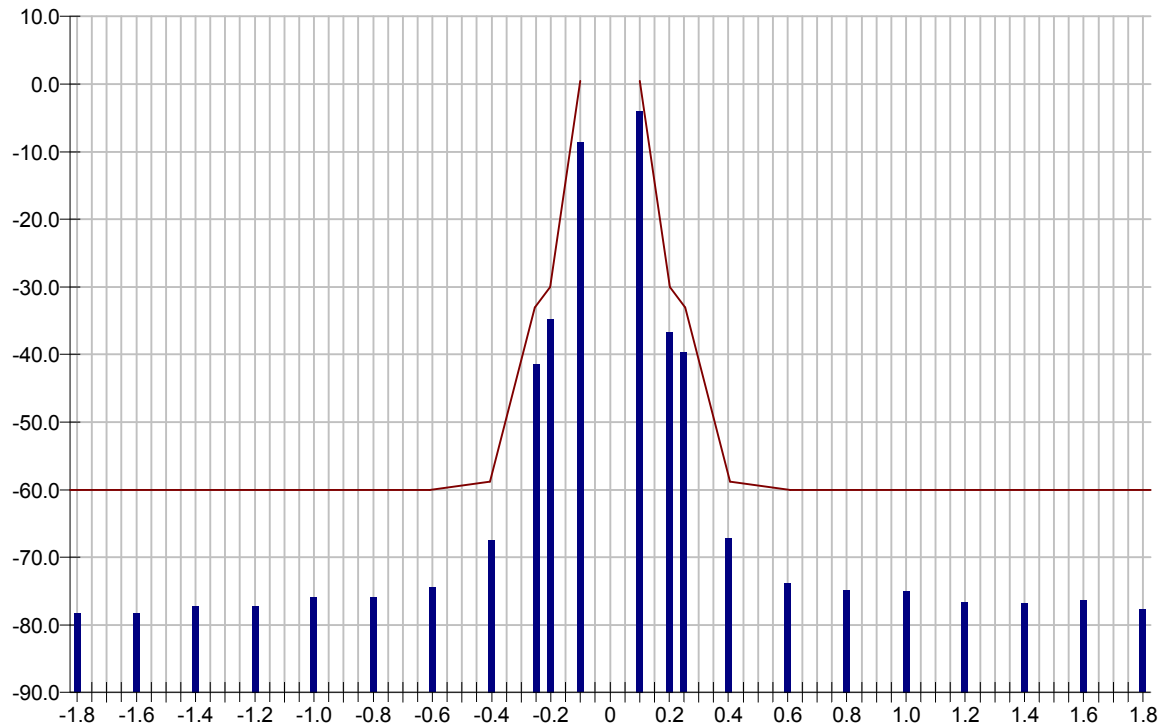
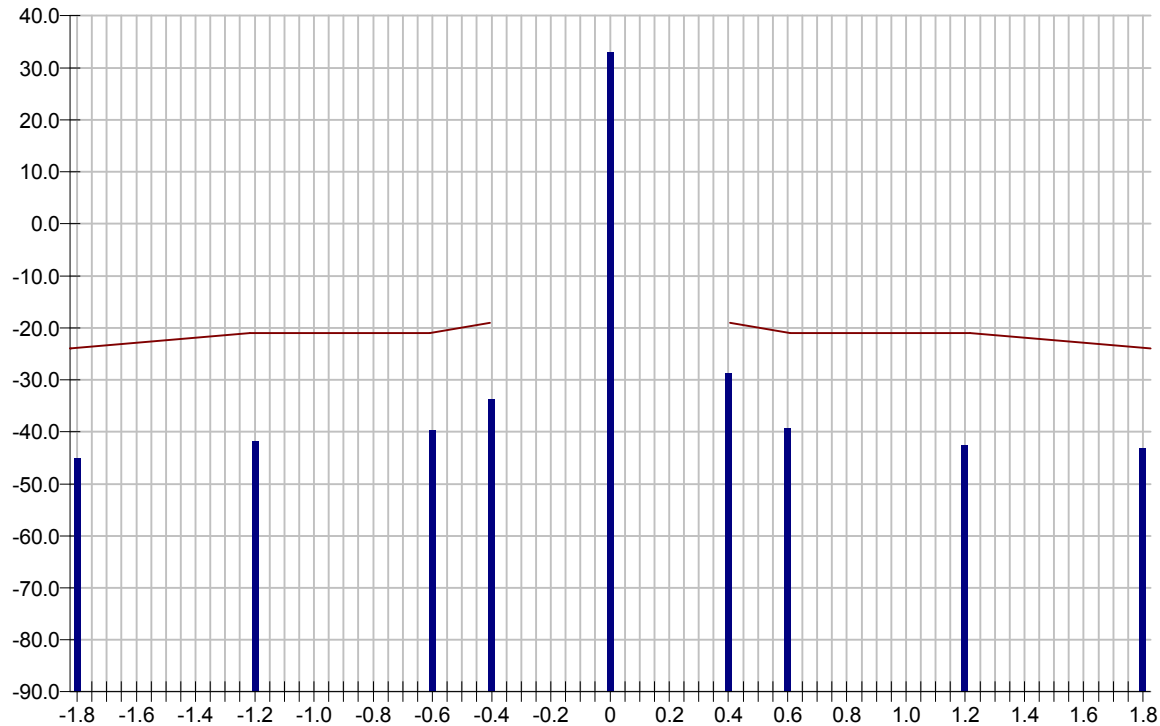
MS Serial Number: 35462541-076509-9

## Result:

(Execution Time: 24.6 Seconds)

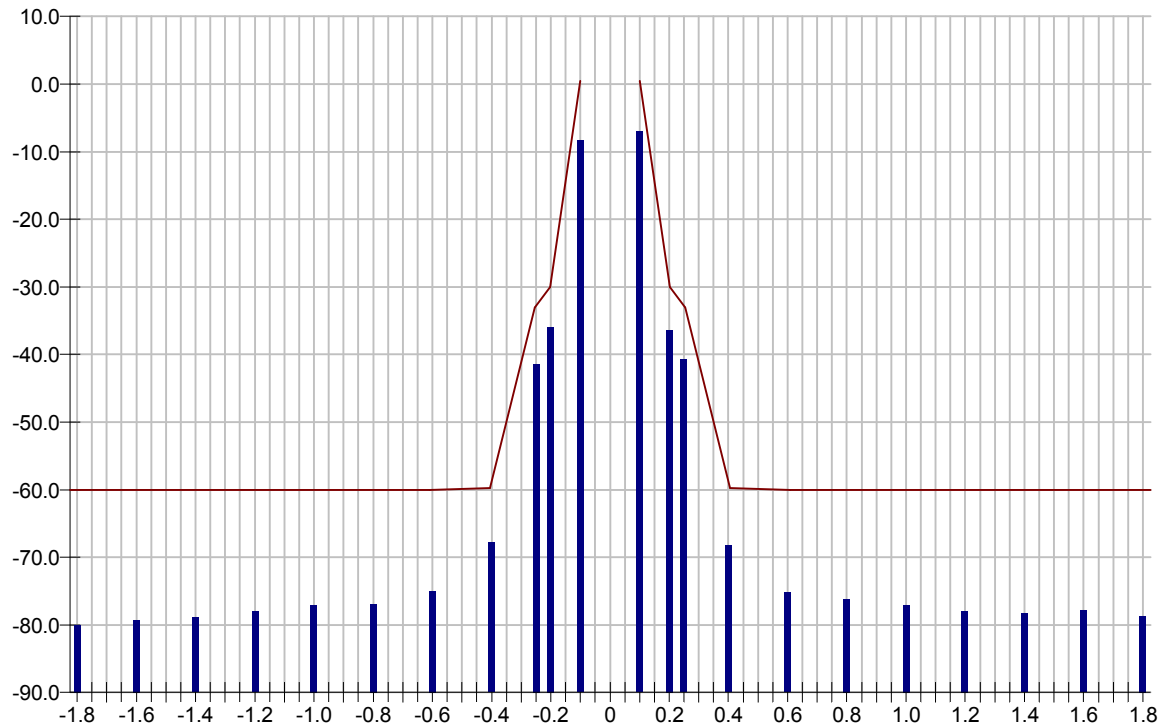
17 Tests passed / 0 Tests failed

**Annex:****Spectrum due to Modulation***PCL: 5, Channel: 62, Reference Power: 25.1 dBm***Annex:****Spectrum due to Switching***PCL: 5, Channel: 62, Reference Power: 0.0 dBm*

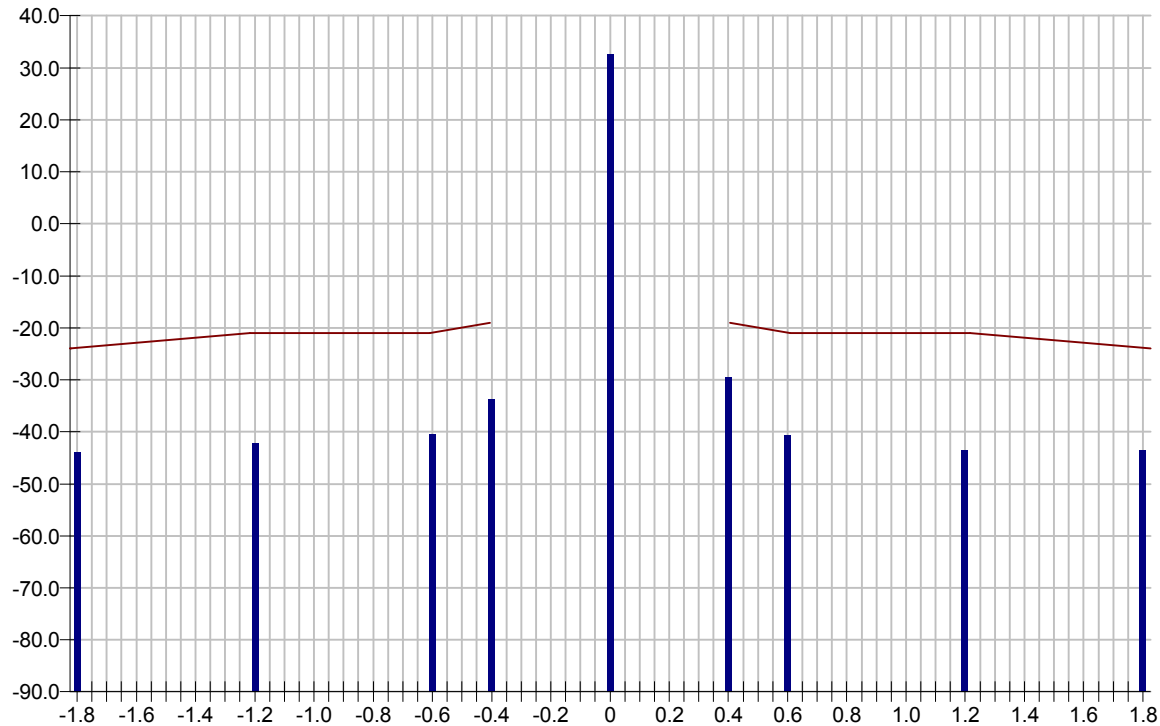
**Annex:****Spectrum due to Modulation***PCL: 5, Channel: 1, Reference Power: 22.8 dBm***Annex:****Spectrum due to Switching***PCL: 5, Channel: 1, Reference Power: 0.0 dBm*

**Annex:****Spectrum due to Modulation**

PCL: 5, Channel: 124, Reference Power: 23.7 dBm

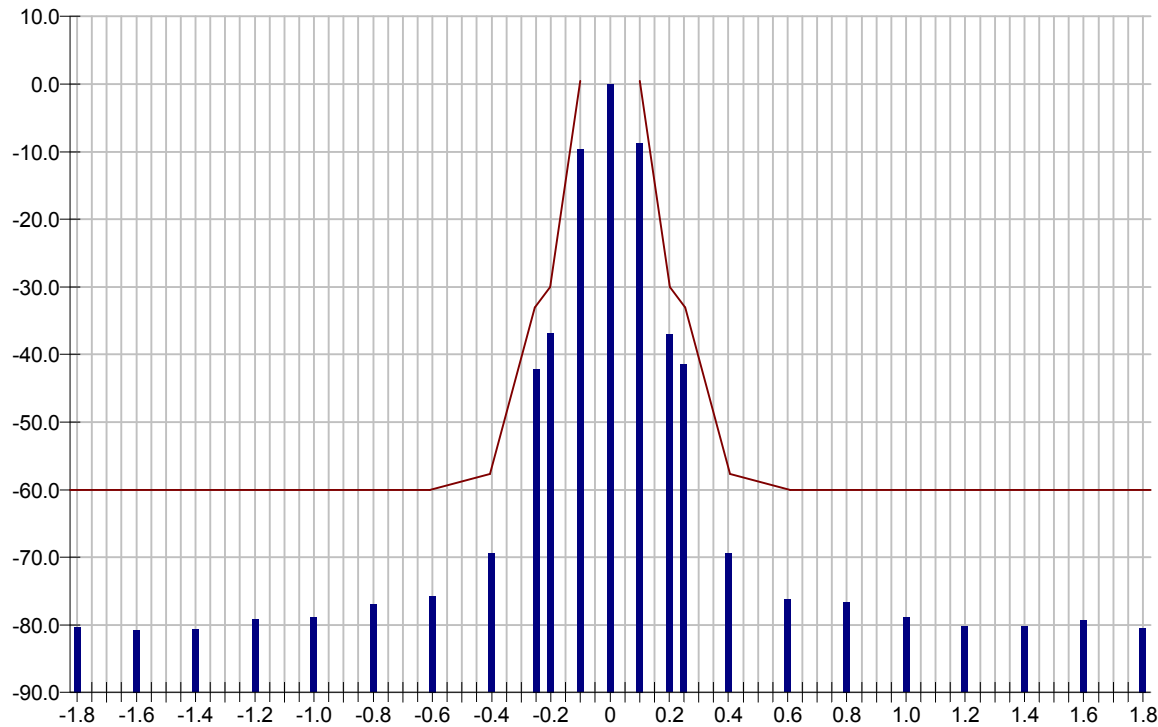
**Annex:****Spectrum due to Switching**

PCL: 5, Channel: 124, Reference Power: 0.0 dBm

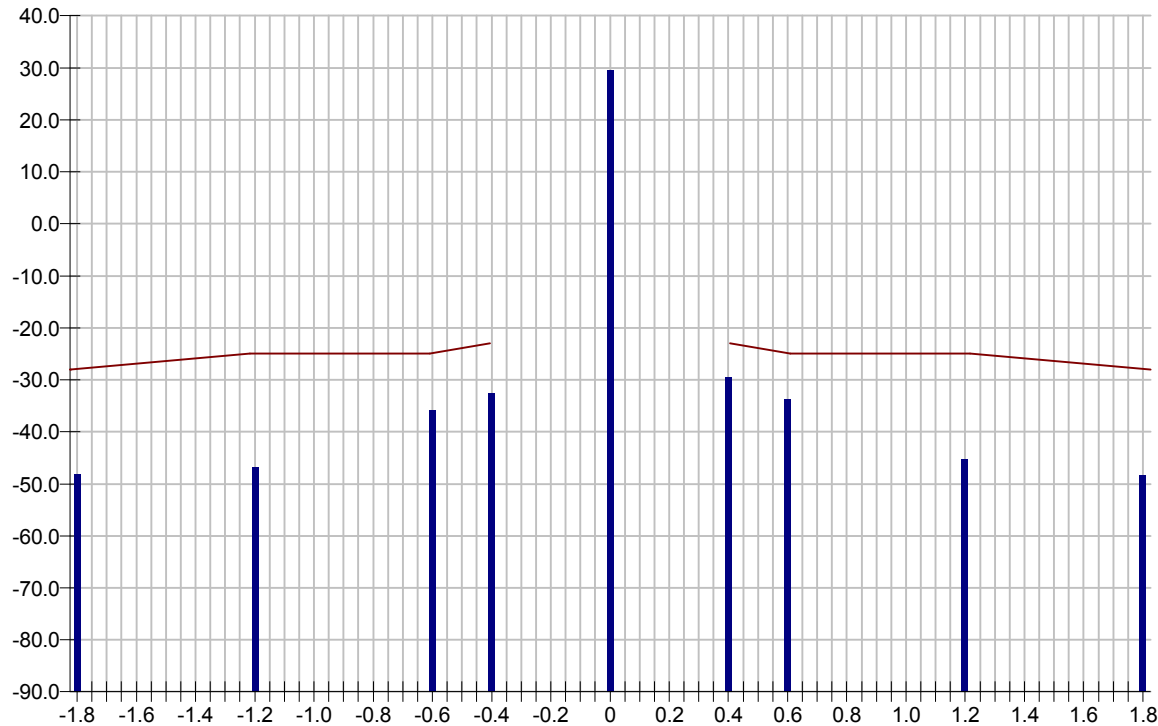


**Annex:****Spectrum due to Modulation**

PCL: 7, Channel: 62, Reference Power: 21.6 dBm

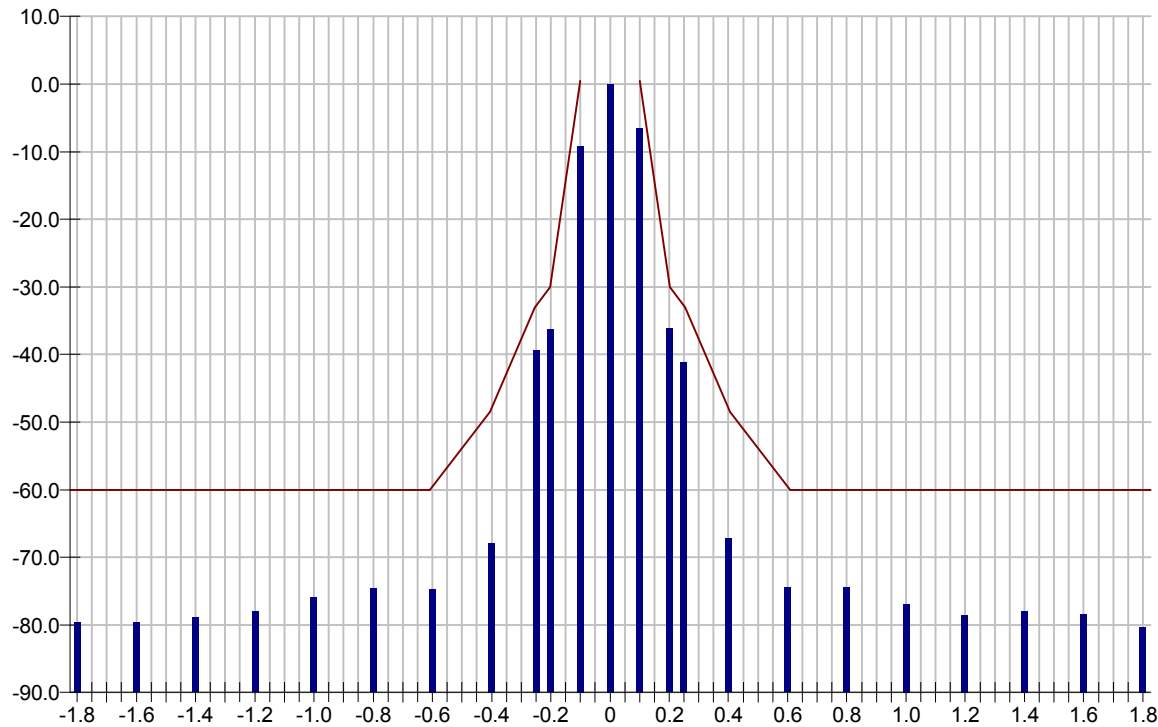
**Annex:****Spectrum due to Switching**

PCL: 7, Channel: 62, Reference Power: 0.0 dBm

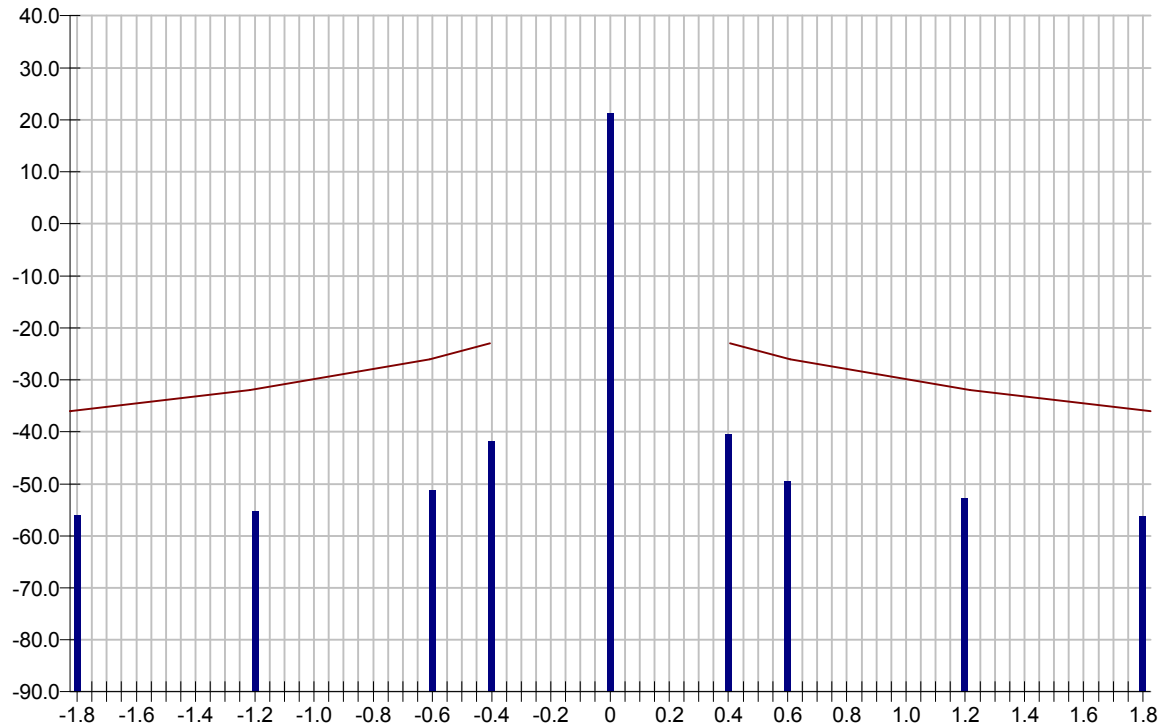


**Annex:****Spectrum due to Modulation**

PCL: 11, Channel: 1, Reference Power: 12.5 dBm

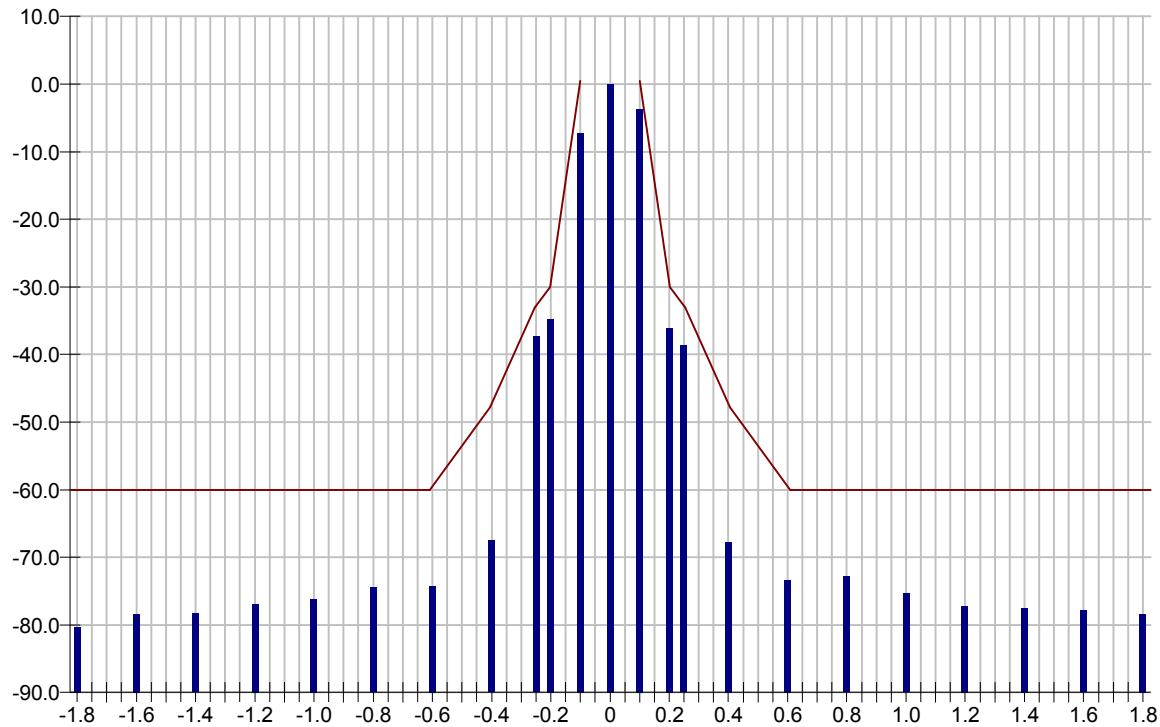
**Annex:****Spectrum due to Switching**

PCL: 11, Channel: 1, Reference Power: 0.0 dBm

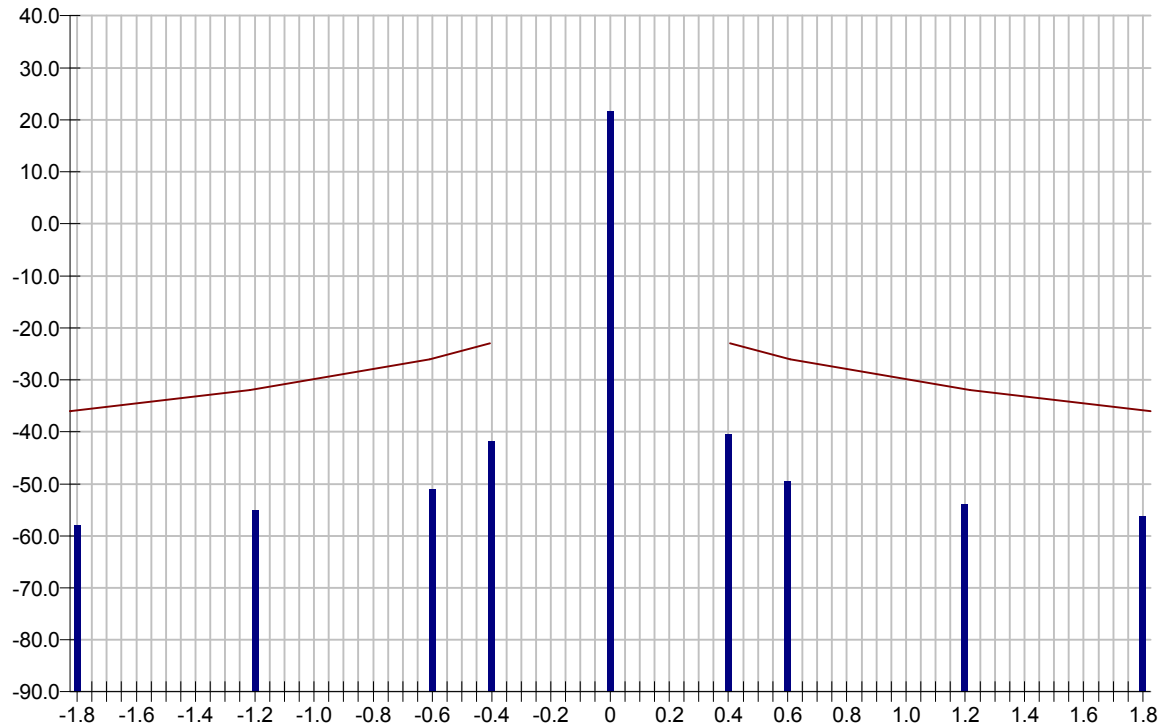


**Annex:****Spectrum due to Modulation**

PCL: 11, Channel: 62, Reference Power: 11.8 dBm

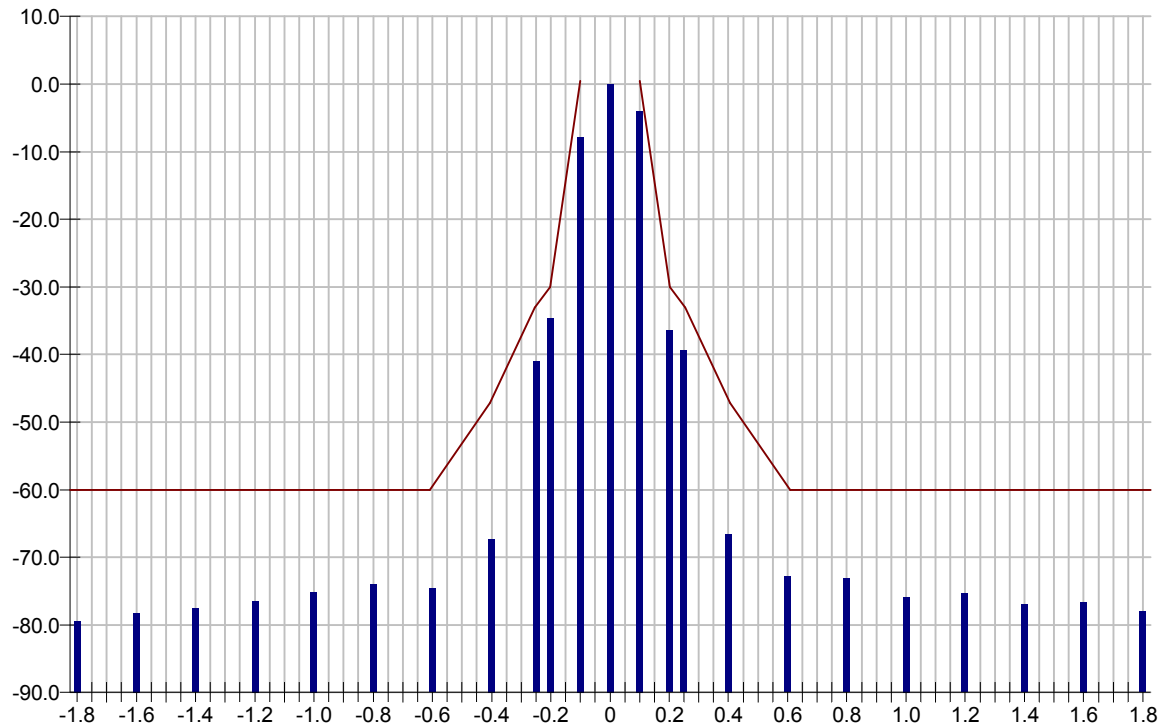
**Annex:****Spectrum due to Switching**

PCL: 11, Channel: 62, Reference Power: 0.0 dBm

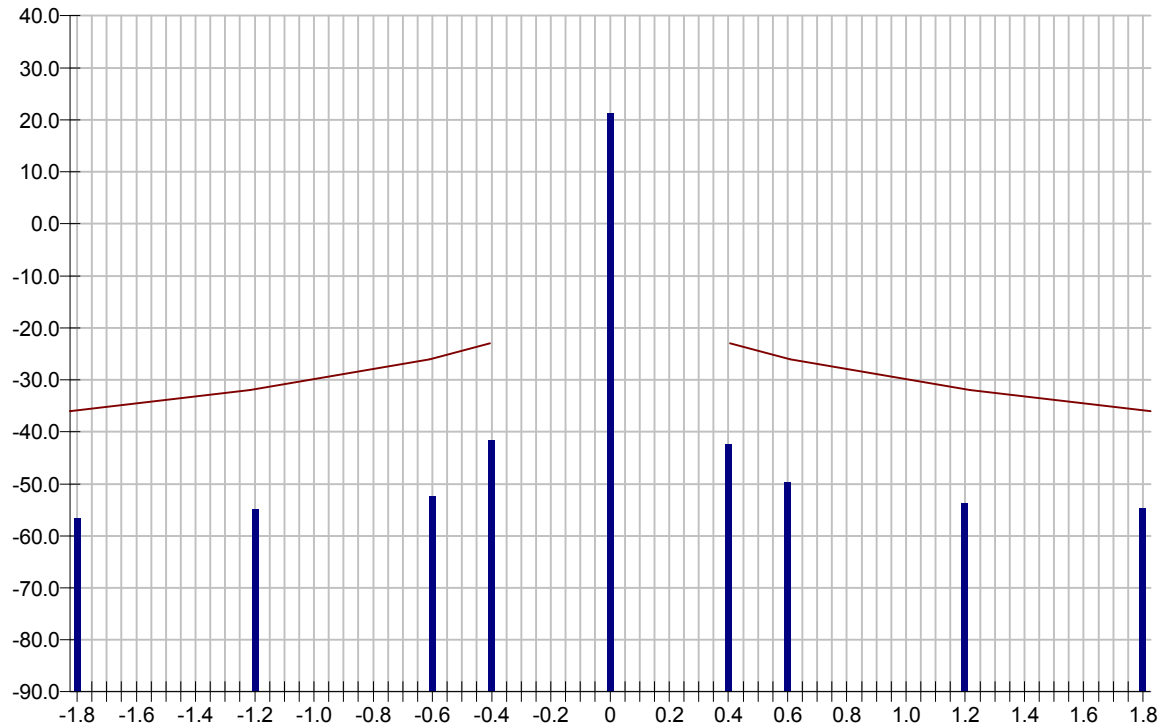


**Annex:****Spectrum due to Modulation**

PCL: 11, Channel: 124, Reference Power: 11.1 dBm

**Annex:****Spectrum due to Switching**

PCL: 11, Channel: 124, Reference Power: 0.0 dBm



# Measurement Report



ROHDE & SCHWARZ

報告編號: TGON1917-03

Operator: noname

2021年5月27日 上午 10:44:37

CMU Ident: Rohde&Schwarz, CMU 200-1100.0008.02, 117995, V5.22

Options: 0,B17,B21Var14,B52Var14,B54Var14,B56Var54,B66,COPROC\_FULLL,B83,B85,B89,B96,PCMCIA,WDDC400,K16  
K17,K20,K21,K22,K23,K24,K27,K28,K29,K42,K43,K56,K57,K58,K59,K60,K61,K62,K63,K64,K65,K66,K67  
K68,K69,K83,K84,K85,K86,K88,K839,K849,K859,K869,FMR6,Intel Celeron Mobil,256 MB  
rxtx1

Sequence: - - -

| Test Name and Condition | Lower Limit | Upper Limit | Measured Value | P/F |
|-------------------------|-------------|-------------|----------------|-----|
|-------------------------|-------------|-------------|----------------|-----|

Network: GSM 900, BCCH Channel/Level: 62/-85.0 dBm, TCH Channel: 62, TCH Level (dBm): -85.0, Support GSM, PCL: 5

(Main) Timeslot: 3, Attenuation (In/Out): 5.1/5.1 dB, Slot Mode: Single Slot, Bitstream: PR9, AuxTX: Off

Traffic Mode: Full Rate V1

IMSI: 1. 1.0123456789, Serial: 35462541-076509-9, Revision: PH2P, Number: 111, Traffic: NAN, Power Class: 4

|                          |  |  |        |   |
|--------------------------|--|--|--------|---|
| Call from Mobile:        |  |  | passed | ✓ |
| Keypad Test: (Ref.: 111) |  |  | passed | ✓ |

GSM Output RF Spectrum Test

TCH: 62, CMU\_In: 5.50dB, CMU\_Out: 5.50dB, FSx\_InsertLoss: 7.69 dB, FSx internal Att: 20.00 dB

Spectrum Due to Modulation

PCL: 5, Num of Speech Frames: 50

|                                               |  |            |            |   |
|-----------------------------------------------|--|------------|------------|---|
| FT Offset To - End Of Transmit Band - 2.0 MHz |  | -38.00 dBm | -68.11 dBm | ✓ |
| FT Offset To - End Of Transmit Band           |  | -38.00 dBm | -59.51 dBm | ✓ |
| FT Offset To - 6.0 MHz                        |  | -32.00 dBm | -60.33 dBm | ✓ |
| FT Offset To - 3.0 MHz                        |  | -30.00 dBm | -57.54 dBm | ✓ |
| FT Offset To - 1.8 MHz                        |  | -27.00 dBm | -53.07 dBm | ✓ |
| FT Offset To + 1.8 MHz                        |  | -27.00 dBm | -53.05 dBm | ✓ |
| FT Offset To + 3.0 MHz                        |  | -30.00 dBm | -56.16 dBm | ✓ |
| FT Offset To + 6.0 MHz                        |  | -32.00 dBm | -60.64 dBm | ✓ |
| FT Offset To + End Of Transmit Band           |  | -38.00 dBm | -60.10 dBm | ✓ |
| FT Offset To + End Of Transmit Band + 2.0 MHz |  | -38.00 dBm | -59.01 dBm | ✓ |

# Measurement Report



ROHDE & SCHWARZ

報告編號：TGON1917-03

| Test Name and Condition                       | Lower Limit | Upper Limit | Measured Value | P/F |
|-----------------------------------------------|-------------|-------------|----------------|-----|
| <i>Spectrum Due to Modulation &lt; 1.8MHz</i> |             |             |                |     |
| <i>PCL: 19, Num of Speech Frames: 200</i>     |             |             |                |     |
| FT Offset To - 1.6 MHz                        |             | -27.00 dBm  | -72.54 dBm     | ✓   |
| FT Offset To - 1.4 MHz                        |             | -27.00 dBm  | -71.51 dBm     | ✓   |
| FT Offset To - 1.2 MHz                        |             | -27.00 dBm  | -72.52 dBm     | ✓   |
| FT Offset To - 1.0 MHz                        |             | -27.00 dBm  | -70.19 dBm     | ✓   |
| FT Offset To - 800 kHz                        |             | -27.00 dBm  | -69.89 dBm     | ✓   |
| FT Offset To - 600 kHz                        |             | -27.00 dBm  | -70.86 dBm     | ✓   |
| FT Offset To - 400 kHz                        |             | -27.00 dBm  | -71.64 dBm     | ✓   |
| FT Offset To - 250 kHz                        |             | 0.00 dBm    | -74.02 dBm     | ✓   |
| FT Offset To - 200 kHz                        |             | 3.00 dBm    | -74.48 dBm     | ✓   |
| FT Offset To - 100 kHz                        |             | 33.50 dBm   | -74.16 dBm     | ✓   |
| FT                                            |             | 33.50 dBm   | -75.14 dBm     | ✓   |
| FT Offset To + 100 kHz                        |             | 33.50 dBm   | -74.24 dBm     | ✓   |
| FT Offset To + 200 kHz                        |             | 3.00 dBm    | -75.44 dBm     | ✓   |
| FT Offset To + 250 kHz                        |             | 0.00 dBm    | -73.82 dBm     | ✓   |
| FT Offset To + 400 kHz                        |             | -27.00 dBm  | -71.34 dBm     | ✓   |
| FT Offset To + 600 kHz                        |             | -27.00 dBm  | -69.78 dBm     | ✓   |
| FT Offset To + 800 kHz                        |             | -27.00 dBm  | -70.25 dBm     | ✓   |
| FT Offset To + 1.0 MHz                        |             | -27.00 dBm  | -70.26 dBm     | ✓   |
| FT Offset To + 1.2 MHz                        |             | -27.00 dBm  | -70.83 dBm     | ✓   |
| FT Offset To + 1.4 MHz                        |             | -27.00 dBm  | -71.81 dBm     | ✓   |
| FT Offset To + 1.6 MHz                        |             | -27.00 dBm  | -72.11 dBm     | ✓   |
| <i>Spectrum Due to Switching</i>              |             |             |                |     |
| <i>PCL: 5, Num of Speech Frames: 10</i>       |             |             |                |     |
| FT Offset To - 1.8 MHz                        |             | -24.00 dBm  | -64.12 dBm     | ✓   |
| FT Offset To - 1.2 MHz                        |             | -21.00 dBm  | -60.62 dBm     | ✓   |
| FT Offset To - 600 kHz                        |             | -21.00 dBm  | -58.34 dBm     | ✓   |
| FT Offset To - 400 kHz                        |             | -19.00 dBm  | -58.57 dBm     | ✓   |
| FT Offset To + 400 kHz                        |             | -19.00 dBm  | -55.54 dBm     | ✓   |
| FT Offset To + 600 kHz                        |             | -21.00 dBm  | -56.60 dBm     | ✓   |
| FT Offset To + 1.2 MHz                        |             | -21.00 dBm  | -60.50 dBm     | ✓   |
| FT Offset To + 1.8 MHz                        |             | -24.00 dBm  | -63.91 dBm     | ✓   |



## 附錄 C. 混附波輻射連線狀態和空閒狀態檢驗數據

# Measurement Report



ROHDE & SCHWARZ

報告編號: TGON1917-03

Operator: noname

2021年5月27日 上午 10:30:23

CMU Ident: Rohde&Schwarz,CMU 200-1100.0008.02,117995,V5.22

Options: 0,B17,B21Var14,B52Var14,B54Var14,B56Var54,B66,COPROC\_FULLL,B83,B85,B89,B96,PCMCIA,WDDC400,K16  
K17,K20,K21,K22,K23,K24,K27,K28,K29,K42,K43,K56,K57,K58,K59,K60,K61,K62,K63,K64,K65,K66,K67  
K68,K69,K83,K84,K85,K86,K88,K839,K849,K859,K869,FMR6,Intel Celeron Mobil,256 MB  
rxtx1

Sequence: - - -

| Test Name and Condition                                                                                          | Lower Limit | Upper Limit | Measured Value | P/F |
|------------------------------------------------------------------------------------------------------------------|-------------|-------------|----------------|-----|
| Network: GSM 900, BCCH Channel/Level: 32/-85.0 dBm, TCH Channel: 62, TCH Level (dBm): -85.0, Support GSM, PCL: 5 |             |             |                |     |
| (Main) Timeslot: 3, Attenuation (In/Out): 5.1/5.1 dB, Slot Mode: Single Slot, Bitstream: Handset, AuxTX: Off     |             |             |                |     |
| Traffic Mode: Full Rate V1                                                                                       |             |             |                |     |
| IMSI: 1. 1.0123456789,Serial: 35462541-076509-9, Revision: PH2P, Number: 111, Traffic: NAN, Power Class: 4       |             |             |                |     |
| Call from Mobile:                                                                                                |             |             | passed         | ✓   |
| Keypad Test: (Ref.: 111)                                                                                         |             |             | passed         | ✓   |
| Frequency Range: Start Freq: 0.10000 MHz, Stop Freq: 50.00000 MHz, FSxPath Loss: 4.20000 dB                      |             |             |                |     |
| GSM TX Spurious Emissions Max. power at 0.100 MHz                                                                |             | -36.00 dBm  | -80.96 dBm     | ✓   |
| Frequency Range: Start Freq: 50.00000 MHz, Stop Freq: 500.00000 MHz, FSxPath Loss: 6.21000 dB                    |             |             |                |     |
| GSM TX Spurious Emissions Max. power at 416.000 MHz                                                              |             | -36.00 dBm  | -58.30 dBm     | ✓   |
| Frequency Range: Start Freq: 500.00000 MHz, Stop Freq: 860.00000 MHz, FSxPath Loss: 7.27000 dB                   |             |             |                |     |
| GSM TX Spurious Emissions Max. power at 850.640 MHz                                                              |             | -36.00 dBm  | -52.34 dBm     | ✓   |
| Frequency Range: Start Freq: 860.00000 MHz, Stop Freq: 870.00000 MHz, FSxPath Loss: 7.27000 dB                   |             |             |                |     |
| GSM TX Spurious Emissions Max. power at 863.580 MHz                                                              |             | -36.00 dBm  | -59.88 dBm     | ✓   |
| Frequency Range: Start Freq: 870.00000 MHz, Stop Freq: 880.00000 MHz, FSxPath Loss: 7.27000 dB                   |             |             |                |     |
| GSM TX Spurious Emissions Max. power at 876.300 MHz                                                              |             | -36.00 dBm  | -64.47 dBm     | ✓   |
| Frequency Range: Start Freq: 880.00000 MHz, Stop Freq: 896.40000 MHz, FSxPath Loss: 7.27000 dB                   |             |             |                |     |
| GSM TX Spurious Emissions Max. power at 895.646 MHz                                                              |             | -36.00 dBm  | -59.68 dBm     | ✓   |
| Frequency Range: Start Freq: 896.40000 MHz, Stop Freq: 900.60000 MHz, FSxPath Loss: 7.30000 dB                   |             |             |                |     |
| GSM TX Spurious Emissions Max. power at 900.600 MHz                                                              |             | -36.00 dBm  | -55.60 dBm     | ✓   |
| Frequency Range: Start Freq: 904.20000 MHz, Stop Freq: 908.40000 MHz, FSxPath Loss: 7.30000 dB                   |             |             |                |     |
| GSM TX Spurious Emissions Max. power at 904.460 MHz                                                              |             | -36.00 dBm  | -56.09 dBm     | ✓   |
| Frequency Range: Start Freq: 908.40000 MHz, Stop Freq: 915.00000 MHz, FSxPath Loss: 7.30000 dB                   |             |             |                |     |
| GSM TX Spurious Emissions Max. power at 909.232 MHz                                                              |             | -36.00 dBm  | -57.68 dBm     | ✓   |
| Frequency Range: Start Freq: 915.00000 MHz, Stop Freq: 925.00000 MHz, FSxPath Loss: 7.30000 dB                   |             |             |                |     |
| GSM TX Spurious Emissions Max. power at 915.800 MHz                                                              |             | -36.00 dBm  | -59.00 dBm     | ✓   |
| Frequency Range: Start Freq: 925.00000 MHz, Stop Freq: 935.00000 MHz, FSxPath Loss: 7.30000 dB                   |             |             |                |     |
| GSM TX Spurious Emissions Max. power at 931.160 MHz                                                              |             | -36.00 dBm  | -58.84 dBm     | ✓   |
| Frequency Range: Start Freq: 935.00000 MHz, Stop Freq: 945.00000 MHz, FSxPath Loss: 7.30000 dB                   |             |             |                |     |
| GSM TX Spurious Emissions Max. power at 939.340 MHz                                                              |             | -36.00 dBm  | -59.68 dBm     | ✓   |
| Frequency Range: Start Freq: 945.00000 MHz, Stop Freq: 1000.00000 MHz, FSxPath Loss: 7.10000 dB                  |             |             |                |     |
| GSM TX Spurious Emissions Max. power at 954.900 MHz                                                              |             | -36.00 dBm  | -52.47 dBm     | ✓   |
| Frequency Range: Start Freq: 1000.00000 MHz, Stop Freq: 3000.00000 MHz, FSxPath Loss: 10.00000 dB                |             |             |                |     |
| GSM TX Spurious Emissions Max. power at 2708.000 MHz                                                             |             | -30.00 dBm  | -51.44 dBm     | ✓   |
| Frequency Range: Start Freq: 3000.00000 MHz, Stop Freq: 6000.00000 MHz, FSxPath Loss: 12.25000 dB                |             |             |                |     |
| GSM TX Spurious Emissions Max. power at 3606.000 MHz                                                             |             | -30.00 dBm  | -45.67 dBm     | ✓   |
| Frequency Range: Start Freq: 6000.00000 MHz, Stop Freq: 12750.00000 MHz, FSxPath Loss: 17.36000 dB               |             |             |                |     |
| GSM TX Spurious Emissions Max. power at 8124.000 MHz                                                             |             | -30.00 dBm  | -50.31 dBm     | ✓   |
| Call Release Test:                                                                                               |             |             | passed         | ✓   |

# Measurement Report



報告編號：TGON1917-03

**ROHDE & SCHWARZ**

| Test Name and Condition                                                                            | Lower Limit | Upper Limit | Measured Value | P/F |
|----------------------------------------------------------------------------------------------------|-------------|-------------|----------------|-----|
| Frequency Range: Start Freq: 0.10000 MHz, Stop Freq: 50.00000 MHz, FSxPath Loss: 3.92000 dB        |             |             |                |     |
| <b>GSM TX Spurious Emissions</b> Max. power at 0.100 MHz                                           |             | -57.00 dBm  | -81.35 dBm     | ✓   |
| Frequency Range: Start Freq: 50.00000 MHz, Stop Freq: 880.00000 MHz, FSxPath Loss: 6.15000 dB      |             |             |                |     |
| <b>GSM TX Spurious Emissions</b> Max. power at 805.020 MHz                                         |             | -57.00 dBm  | -80.43 dBm     | ✓   |
| Frequency Range: Start Freq: 880.00000 MHz, Stop Freq: 915.00000 MHz, FSxPath Loss: 6.30000 dB     |             |             |                |     |
| <b>GSM TX Spurious Emissions</b> Max. power at 913.670 MHz                                         |             | -59.00 dBm  | -85.59 dBm     | ✓   |
| Frequency Range: Start Freq: 915.00000 MHz, Stop Freq: 1000.00000 MHz, FSxPath Loss: 6.16000 dB    |             |             |                |     |
| <b>GSM TX Spurious Emissions</b> Max. power at 941.350 MHz                                         |             | -57.00 dBm  | -78.85 dBm     | ✓   |
| Frequency Range: Start Freq: 1000.00000 MHz, Stop Freq: 1710.00000 MHz, FSxPath Loss: 7.00000 dB   |             |             |                |     |
| <b>GSM TX Spurious Emissions</b> Max. power at 1247.080 MHz                                        |             | -47.00 dBm  | -73.82 dBm     | ✓   |
| Frequency Range: Start Freq: 1710.00000 MHz, Stop Freq: 1785.00000 MHz, FSxPath Loss: 7.10000 dB   |             |             |                |     |
| <b>GSM TX Spurious Emissions</b> Max. power at 1758.600 MHz                                        |             | -53.00 dBm  | -84.77 dBm     | ✓   |
| Frequency Range: Start Freq: 1785.00000 MHz, Stop Freq: 12750.00000 MHz, FSxPath Loss: 15.30000 dB |             |             |                |     |
| <b>GSM TX Spurious Emissions</b> Max. power at 5793.000 MHz                                        |             | -47.00 dBm  | -48.03 dBm     | ✓   |

MS Serial Number: 35462541-076509-9

**Result:**

(Execution Time: 716.7 Seconds)

**26 Tests passed / 0 Tests failed****————THE END————**