

## Measurement Data For Transmitter

### 6.1 Measurement Data For Transmitter {2.983(e)}

| Section Number | Item                                                            | Measurement Results  | Procedure Exhibit # |
|----------------|-----------------------------------------------------------------|----------------------|---------------------|
| 2.985(a)       | 1 Radio Frequency Power Output                                  | Table 6.2.2          | 7.1                 |
|                | Time Masks                                                      | Figure 6.2.1 ~ 6.2.9 |                     |
| 2.987(d)       | 2 Modulation Char.                                              | Figure 6.3.1         |                     |
| 2.989(h)(1)    | 3 Occupied Bandwidth                                            | Table 6.4.1          | 7.2                 |
| 2.991          | 4 Spurious Emissions at Antenna Terminal                        | Table 6.6.1 ~ 6.6.12 | 7.3                 |
| 2.993          | 5 Field Strength of Spurious Radiation                          | Table 6.7.1 ~ 6.7.3  | 7.4                 |
| 2.995          | 6 Frequency Stability                                           | Table 6.8.1 ~ 6.8.2  | 7.5                 |
| 24.238(b)(c)   | 7 Conducted Emissions at the Band Edges of PCS Frequency Blocks | Figure 6.5.1 ~ 6.5.6 | 7.6                 |

### 6.2 Radio Frequency Power Output Measurement Data {2.985(a)}

#### 6.2.1 Conducted Power Output Measurement

| Power Control Level | Nominal Peak Output Power (dBm) | Tolerance (dB) |
|---------------------|---------------------------------|----------------|
| 0                   | 30                              | ±2             |
| 7                   | 16                              | ±3             |
| 15                  | 0                               | ±5             |

**Table 6.2.1** Radio Frequency Power Output Measurement Limits

| Frequency (MHz) | Channel # | Power Control Level | Peak Output Power (dBm) |
|-----------------|-----------|---------------------|-------------------------|
| 1850.2          | 512       | 0                   | 29.33                   |
|                 |           | 7                   | 16.08                   |
|                 |           | 15                  | -1.01                   |
| 1880.0          | 661       | 0                   | 29.45                   |
|                 |           | 7                   | 16.34                   |
|                 |           | 15                  | -0.76                   |
| 1909.8          | 810       | 0                   | 29.16                   |
|                 |           | 7                   | 16.27                   |
|                 |           | 15                  | -1.14                   |

**Table 6.2.2** Conducted Power Measurement Results

**6.2.2 Radiated Output Power Measurement****Radiated Power**

Notes: Substitution method Radiated Power

Distance: 3

| Ant. Pol. (V/H) | Frequency MHz | Reading dB(uV) | Antenna Factor dB(1/m) | Cable Loss dB | Pre-amp Factor dB | External Atten. dB | Net dB(uV/m) | Limit dB(uV/m) | Margin dB |
|-----------------|---------------|----------------|------------------------|---------------|-------------------|--------------------|--------------|----------------|-----------|
| V               | 1850.200      | 94.5           | 28.6                   | 5.0           | 0.0               | 0.0                | 128.1        | N/A            | N/A       |
| V               | 1880.000      | 94.0           | 28.8                   | 5.0           | 0.0               | 0.0                | 127.8        | N/A            | N/A       |
| V               | 1909.800      | 92.1           | 28.9                   | 5.1           | 0.0               | 0.0                | 126.1        | N/A            | N/A       |

**Substitution Method**

| Ant. Pol. (V/H) | Frequency MHz | EUT Measured Reading dB(uV/m) | Sig Generator Level dBm | Forward Power Reading dBm | Antenna Gain dBi | Power EIRP dBm | Radiated Power in Watts |
|-----------------|---------------|-------------------------------|-------------------------|---------------------------|------------------|----------------|-------------------------|
| V               | 1850.200      | 128.1                         | -21.9                   | 22.9                      | 6.4              | 29.3           | 0.851                   |
| V               | 1880.000      | 127.8                         | -21.0                   | 23.2                      | 6.3              | 29.5           | 0.891                   |
| V               | 1909.800      | 126.1                         | -22.2                   | 20.8                      | 6.2              | 27.0           | 0.501                   |

**Comments**

- 1) Sig Generator Level(dBm) refers to raw signal level seen on the signal generator.  
This is recorded for our reference purpose only.
- 2) Forward Power meter reading(dBm) refers to signal level measured on the power meter at the input of transmitting antenna.
- 3) Ant Gain(dBi) refers to transmitting antenna gain in dBi.
- 4) Simple radiated power calculation  

$$\text{Radiated Power(dBm)} = \text{Forward Power level (dBm)} + \text{Antenna gain(dBi)}$$

if the Forward Power level(dBm) = 23.2 dBm and the antenna gain = 6.3 dBi, then

$$\text{Radiated Power(dBm)} = 23.2 \text{ dBm} + 6.3 \text{ dBi} = 29.5 \text{ dBm or approximately 1 Watt}$$

**Table 6.2.3 Radiated Power Measurement Results**

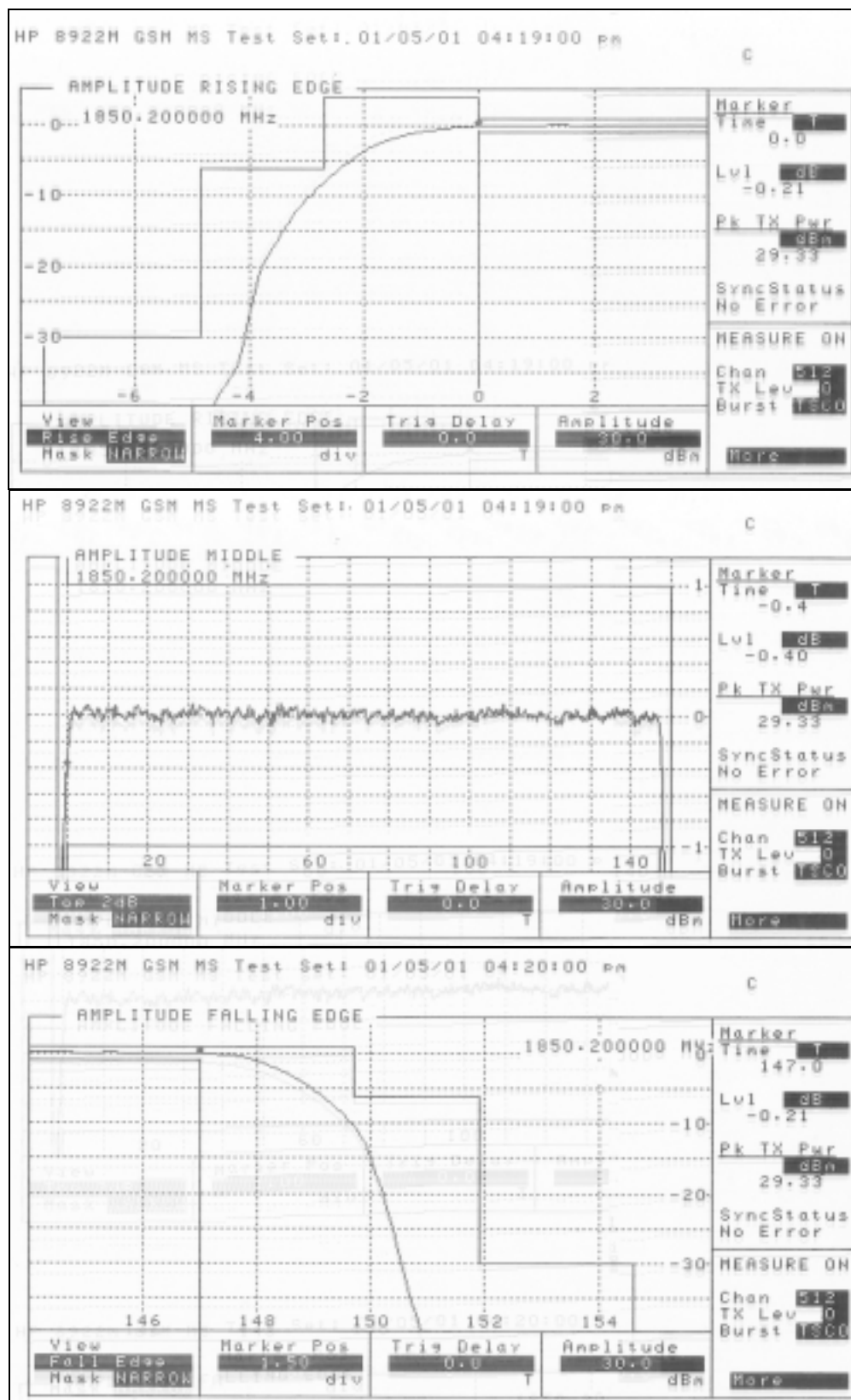


Figure 6.2.1 Carrier 1850.2 MHz (Ch 512) Power Level 0