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: Subsitution 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
   Radiated Power(dBm) = Forward Power level (dBm) + Antenna gain(dBi)

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

   Radiated Power(dBm) = 23.2 dBm + 6.3 dBi = 29.5 dBm or approximately 1 Watt

Table 6.2.3 Radiated Power Measurement Results

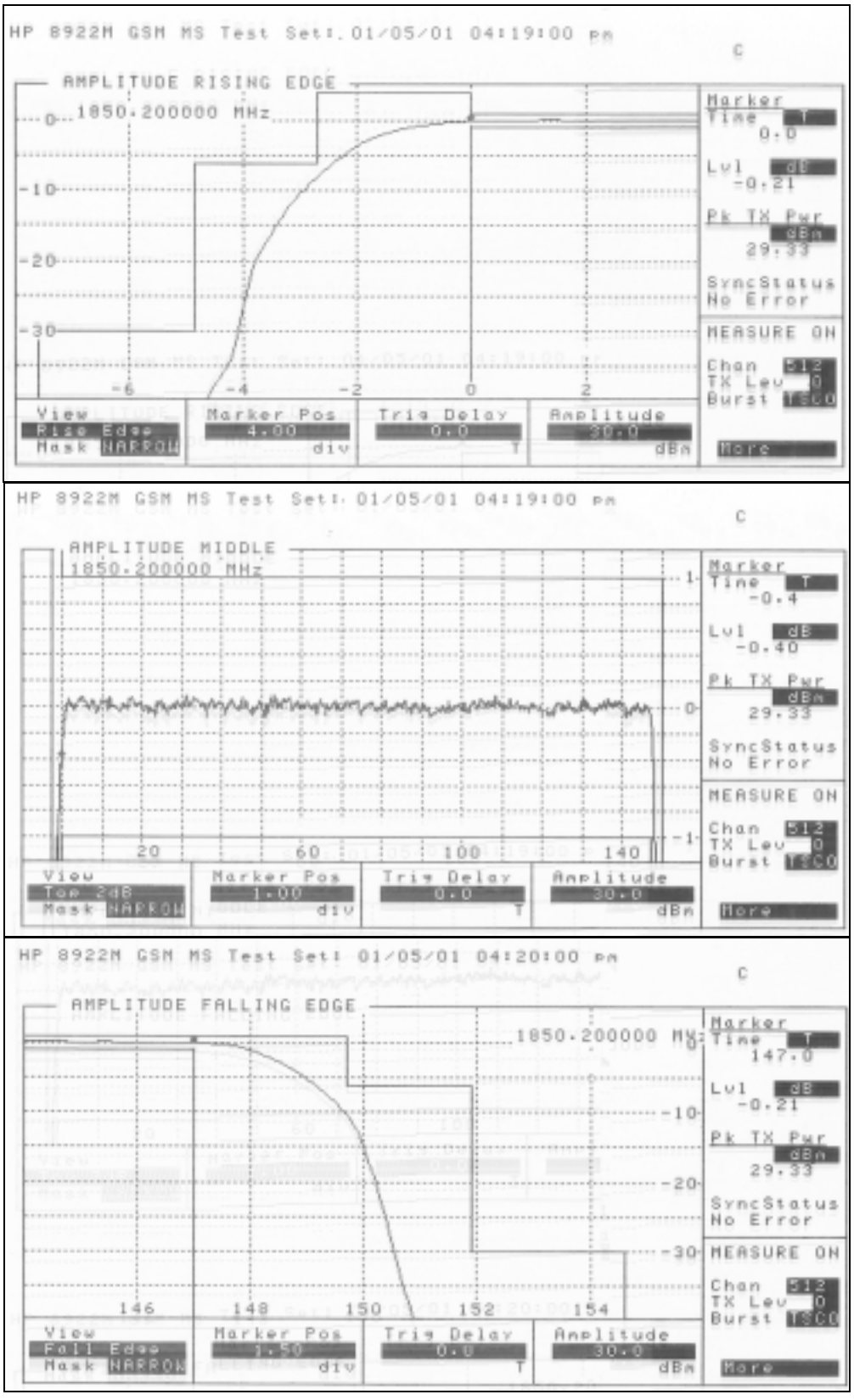

Figure 6.2.1 Carrier 1850.2 MHz (Ch 512) Power Level 0