



## 6.6 Processing Gain of a Direct Sequence Spread Spectrum Measurement

### 6.6.1 Test Instruments and Support Units

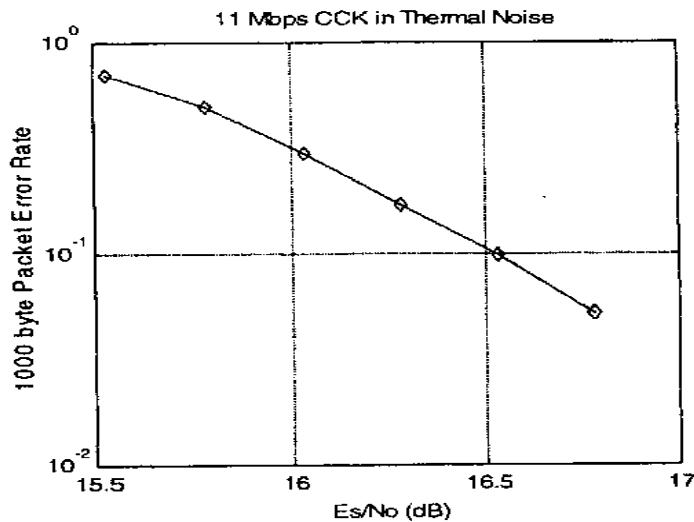
| Description & Manufacturer                       | Model No.   | Serial No. |
|--------------------------------------------------|-------------|------------|
| Hewlett Packard Spectrum Analyzer, 9kHz to 22GHz | HP8593E     | S942848    |
| Marconi Signal Generator, 10kHz to 2.7GHz        | 2031        | 953426     |
| Hewlett Packard Power Meter,                     | HP438A      | S952633    |
| Hewlett Packard Power Sensor, -20 to -70dBm      | HP8481D     | SCD15369   |
| Hewlett Packard Attenuator, 6dB to 10 dB         | HP8493A     | NA         |
| Hewlett Packard Step Attenuator, 1dB steps       | HP8494A     | NA         |
| Hewlett Packard Step Attenuator, 10dB steps      | HP8495D     | NA         |
| Hewlett Packard Power Splitter,                  | HP11667B    | 04390      |
| Campaq Laptop Computer (Qty 2),                  | Armada 1700 | NA         |

### 6.6.2 Method of Measurement

Since the product is used for data transmission, so the recommended BER is  $10^{-5}$ . One packet contents 8 bits, so the recommended Packet Error Rate (PER) is 8%. The processing gain may be measured using the CW jamming margin method. Figure 1 shows the test configuration. The test consists of stepping a signal generator in 50 kHz increments across the passband of the system. At each point, the generator level required to produce the recommended Bit Error Rate (BER) is recorded. This level is jammer level. The output power of the transmitting unit is measured at the same point. The jammer to Signal (J/S) ratio is then calculated. Discard the worst 20% of the J/S data points. The lowest remaining J/S ratio is used when calculating the Process Gain.

The reference PER is specified as 8%. The corresponding Es/No (signal to noise ratio per symbol) is 16.4 dB. The curve is attached as below.

### 1.1 1000 byte PER vs. Es/No



This value and the measured J/S ratio are used in the following equation to calculate the Process Gain (Gp) of the system.

$$G_p = (S/N)_0 + M_j + L_{sys}$$

Where:

$(S/N)_0$ : Signal to noise ratio for the chosen BER.

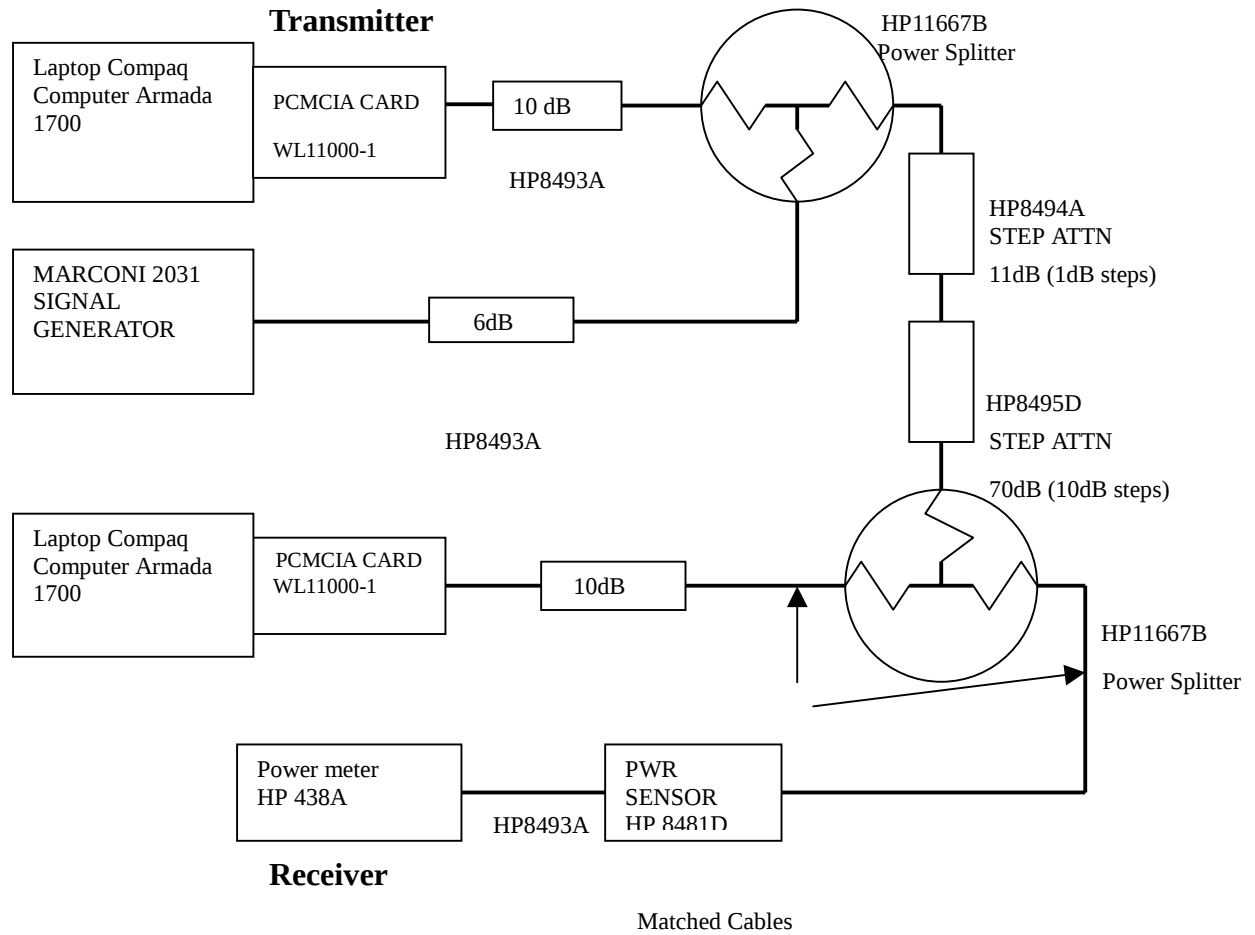
$M_j$ : Maximum jammer to Signal Ratio recorded at the detected BER.

$L_{sys}$ : System losses. For the purpose of this processing gain calculation, we assume  $L_{sys}$  at its minimum value of 2 dB.

Applicable Reference Documents.

1. "HFA3861A Direct Sequence Spread Spectrum Baseband Processor" Harris Corporation Semiconductor Sector Preliminary Data Sheet, Melbourne FL, July 1999.
2. "M-ary Orthogonal Keying BER Curve".

### 6.6.3 Test Setup





#### 6.6.4 Test Procedure

Obtain the simplex link shown. Perform all independent instrumentation calibrations prior to this procedure. Set operating power levels using fixed and variable attenuators in system to meet the following objectives:

1. Signal Power at receiver approximately  $-60\text{dBm}$  (above thermal sensitivity such that thermal noise does not cause bit errors).
2. Signal Power at power meter between  $-20$  and  $-30\text{dBm}$  for optimal linearity.
3. Use spectrum analyzer to monitor test.
4. Ensure that CW Jammer generator RF output is disabled and measure the power at the power meter port using the power meter. This is the relative signal power,  $S_r$ .
5. Disable Transmitter, and set CW Jammer generator RF output frequency equal to the carrier frequency and enable generator output. Set reference CW Jammer power level at power meter port  $8.4\text{dB}$  below  $S_r$  (minimum J/S, or  $10\text{dB}$  processing gain reference level). Note the power level setting on the generator, this is the reference CW Jammer power setting,  $J_r$ .
6. Disable CW Jammer, re-establish link. PER test should be operating essentially error-free.
7. Enable CW Jammer at the reference power level and verify that the PER test indicates a PER of less than 8%.
8. Alternatively, adjust the CW Jammer level to that which causes 8% PER and verify that the S/J is less than  $8.4\text{dB}$ .
9. Repeat step 7 for uniform steps in frequency increments of  $50\text{ kHz}$  across the receiver passband with the CW Jammer. In this case the receiver passband is  $\pm 8.5\text{ MHz}$ .

The numerical data associated with the following radio channel is tabulated and presented for :

|            |           |
|------------|-----------|
| Channel 1  | :2412 MHz |
| Channel 6  | :2437 MHz |
| Channel 11 | :2462 MHz |



#### **6.6.5 EUT Operating condition**

Software provided by client to set the EUT to transmit at lowest, middle and highest channel.

#### **6.6.6 Climate Condition**

The temperature and related humidity: 25°C and 50%



### 6.6.7 Test Results

Although the theoretical processing gain is lower than 10 dB, but the CCK coding provides an extra coding gain of 2.2dB.

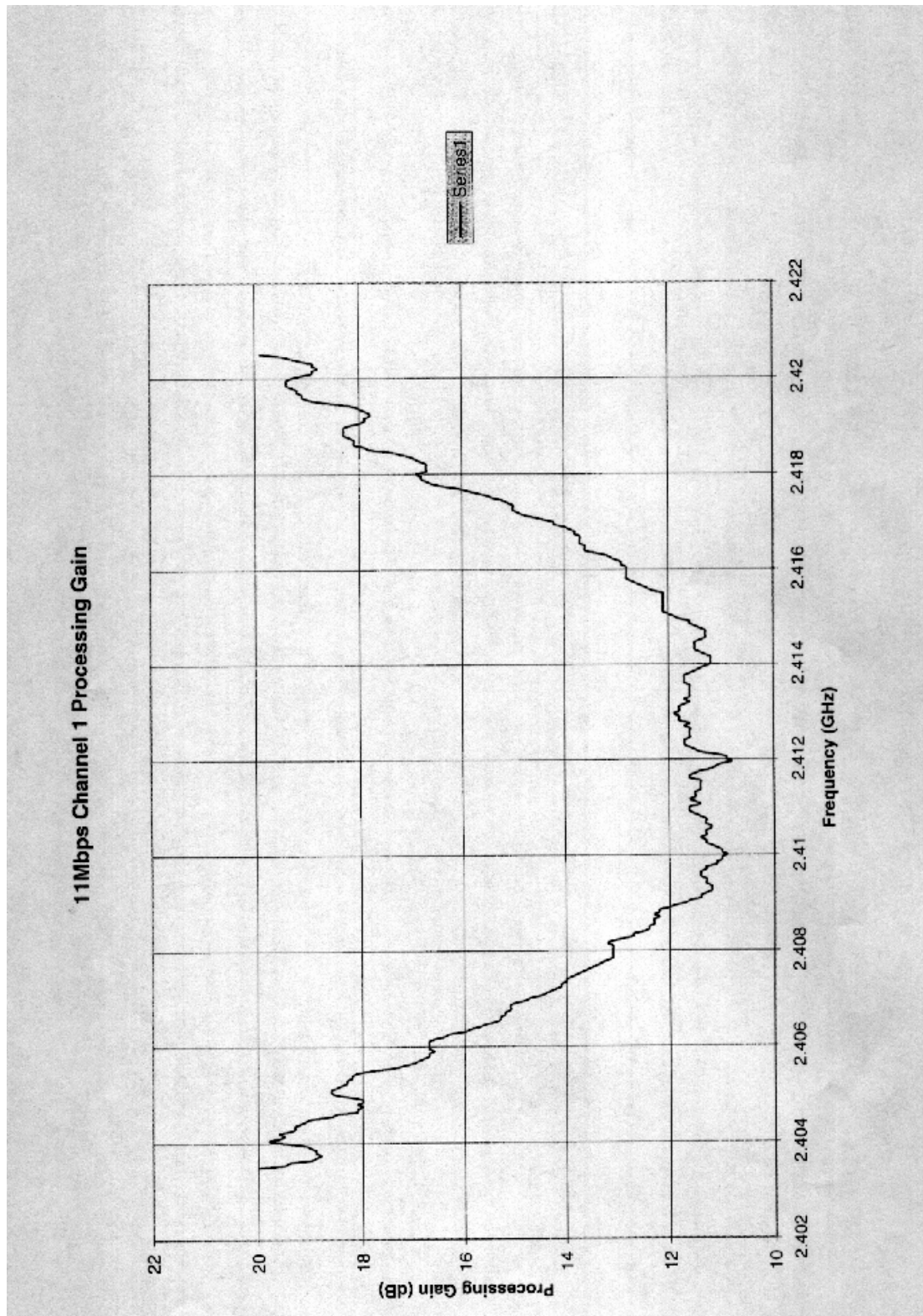
| 11Mbps CHANNEL 1 Processing Gain |            |                 |                  |              |                 |              |
|----------------------------------|------------|-----------------|------------------|--------------|-----------------|--------------|
| Gp = (S/N) ° + Mj + Lsys         |            |                 |                  |              |                 |              |
| Freq.<br>(GHz)                   | Gp<br>(dB) | (S/N) °<br>(dB) | Mj = J/S<br>(dB) | Lsys<br>(dB) | Jammer<br>(dBm) | LVL<br>(dBm) |
| 2.4095                           | 11.3       | 16.4            | -7.1             | 2            | -47.1           | -0.7         |
| 2.40955                          | 11.4       | 16.4            | -7               | 2            | -47             | -0.6         |
| 2.4096                           | 11.4       | 16.4            | -7               | 2            | -47             | -0.6         |
| 2.40965                          | 11.4       | 16.4            | -7               | 2            | -47             | -0.6         |
| 2.4097                           | 11.3       | 16.4            | -7.1             | 2            | -47.1           | -0.7         |
| 2.40975                          | 11.3       | 16.4            | -7.1             | 2            | -47.1           | -0.7         |
| 2.4098                           | 11.1       | 16.4            | -7.3             | 2            | -47.3           | -0.9         |
| 2.40985                          | 11.1       | 16.4            | -7.3             | 2            | -47.3           | 0.9          |
| 2.4099                           | 11         | 16.4            | -7.4             | 2            | -47.4           | -1           |
| 2.40995                          | 11         | 16.4            | -7.4             | 2            | -47.4           | -1           |
| 2.41                             | 10.9       | 16.4            | -7.5             | 2            | -47.5           | -1.1         |
| 2.41005                          | 11         | 16.4            | -7.4             | 2            | -47.4           | -1           |
| 2.4101                           | 11         | 16.4            | -7.4             | 2            | -47.4           | -1           |
| 2.41015                          | 11.1       | 16.4            | -7.3             | 2            | -47.3           | -0.9         |
| 2.4102                           | 11.2       | 16.4            | -7.2             | 2            | -47.2           | -0.8         |
| 2.41025                          | 11.3       | 16.4            | -7.1             | 2            | -47.1           | -0.7         |
| 2.4103                           | 11.3       | 16.4            | -7.1             | 2            | -47.1           | -0.7         |
| 2.41035                          | 11.4       | 16.4            | -7               | 2            | -47             | -0.6         |
| 2.4104                           | 11.3       | 16.4            | -7.1             | 2            | -47.1           | -0.7         |
| 2.41045                          | 11.3       | 16.4            | -7.1             | 2            | -47.1           | -0.7         |
| 2.4105                           | 11.3       | 16.4            | -7.1             | 2            | -47.1           | -0.7         |
| 2.41055                          | 11.2       | 16.4            | -7.2             | 2            | -47.2           | -0.8         |
| 2.4106                           | 11.2       | 16.4            | -7.2             | 2            | -47.2           | -0.8         |
| 2.41065                          | 11.3       | 16.4            | -7.1             | 2            | -47.1           | -0.7         |
| 2.4107                           | 11.3       | 16.4            | -7.1             | 2            | -47.1           | -0.7         |
| 2.41075                          | 11.3       | 16.4            | -7.1             | 2            | -47.1           | -0.7         |
| 2.4108                           | 11.4       | 16.4            | -7               | 2            | -47             | -0.6         |
| 2.41085                          | 11.5       | 16.4            | -6.9             | 2            | -46.9           | -0.5         |
| 2.4109                           | 11.6       | 16.4            | -6.8             | 2            | -46.8           | -0.4         |
| 2.41095                          | 11.6       | 16.4            | -6.8             | 2            | -46.8           | -0.4         |
| 2.411                            | 11.6       | 16.4            | -6.8             | 2            | -46.8           | -0.4         |
| 2.41105                          | 11.4       | 16.4            | -7               | 2            | -47             | -0.6         |
| 2.4111                           | 11.5       | 16.4            | -6.9             | 2            | -46.9           | -0.5         |
| 2.41115                          | 11.6       | 16.4            | -6.8             | 2            | -46.8           | -0.4         |



| 11Mbps CHANNEL 1 Processing Gain |      |         |          |      |        |       |
|----------------------------------|------|---------|----------|------|--------|-------|
| Gp = (S/N) ° + Mj + Lsys         |      |         |          |      |        |       |
| Freq.                            | Gp   | (S/N) ° | Mj = J/S | Lsys | Jammer | LVL   |
| (GHz)                            | (dB) | (dB)    | (dB)     | (dB) | (dBm)  | (dBm) |
| 2.4112                           | 11.5 | 16.4    | -6.9     | 2    | -46.9  | -0.5  |
| 2.41125                          | 11.5 | 16.4    | -6.9     | 2    | -46.9  | -0.5  |
| 2.4113                           | 11.5 | 16.4    | -6.9     | 2    | -46.9  | -0.5  |
| 2.41135                          | 11.4 | 16.4    | -7       | 2    | -47    | -0.6  |
| 2.4114                           | 11.4 | 16.4    | -7       | 2    | -47    | -0.6  |
| 2.41145                          | 11.4 | 16.4    | -7       | 2    | -47    | -0.6  |
| 2.4115                           | 11.4 | 16.4    | -7       | 2    | -47    | -0.6  |
| 2.41155                          | 11.4 | 16.4    | -7       | 2    | -47    | -0.6  |
| 2.4116                           | 11.6 | 16.4    | -6.8     | 2    | -46.8  | -0.4  |
| 2.41165                          | 11.6 | 16.4    | -6.8     | 2    | -46.8  | -0.4  |
| 2.4117                           | 11.5 | 16.4    | -6.9     | 2    | -46.9  | -0.5  |
| 2.41175                          | 11.4 | 16.4    | -7       | 2    | -47    | -0.6  |
| 2.4118                           | 11.2 | 16.4    | -7.2     | 2    | -47.2  | -0.8  |
| 2.41185                          | 11.1 | 16.4    | -7.3     | 2    | -47.3  | -0.9  |
| 2.4119                           | 11   | 16.4    | -7.4     | 2    | -47.4  | -1    |
| 2.41195                          | 10.8 | 16.4    | -7.6     | 2    | -47.6  | -1.2  |
| 2.412                            | 10.9 | 16.4    | -7.5     | 2    | -47.5  | -1.1  |
| 2.41205                          | 10.9 | 16.4    | -7.5     | 2    | -47.5  | -1.1  |
| 2.4121                           | 11.1 | 16.4    | -7.3     | 2    | -47.3  | -0.9  |
| 2.41215                          | 11.4 | 16.4    | -7       | 2    | -47    | -0.6  |
| 2.4122                           | 11.5 | 16.4    | -6.9     | 2    | -46.9  | -0.5  |
| 2.41225                          | 11.6 | 16.4    | -6.8     | 2    | -46.8  | -0.4  |
| 2.4123                           | 11.7 | 16.4    | -6.7     | 2    | -46.7  | -0.3  |
| 2.41235                          | 11.7 | 16.4    | -6.7     | 2    | -46.7  | -0.3  |
| 2.4124                           | 11.7 | 16.4    | -6.7     | 2    | -46.7  | -0.3  |
| 2.41245                          | 11.6 | 16.4    | -6.8     | 2    | -46.8  | -0.4  |
| 2.4125                           | 11.6 | 16.4    | -6.8     | 2    | -46.8  | -0.4  |
| 2.41255                          | 11.6 | 16.4    | -6.8     | 2    | -46.8  | -0.4  |
| 2.4126                           | 11.6 | 16.4    | -6.8     | 2    | -46.8  | -0.4  |
| 2.41265                          | 11.6 | 16.4    | -6.8     | 2    | -46.8  | -0.4  |
| 2.4127                           | 11.7 | 16.4    | -6.7     | 2    | -46.7  | -0.3  |
| 2.41275                          | 11.6 | 16.4    | -6.8     | 2    | -46.8  | -0.4  |
| 2.4128                           | 11.8 | 16.4    | -6.6     | 2    | -46.6  | -0.2  |
| 2.41285                          | 11.8 | 16.4    | -6.6     | 2    | -46.6  | -0.2  |



| 11Mbps CHANNEL 1 Processing Gain |      |         |          |      |        |       |
|----------------------------------|------|---------|----------|------|--------|-------|
| Gp = (S/N) ° + Mj + Lsys         |      |         |          |      |        |       |
| Freq.                            | Gp   | (S/N) ° | Mj = J/S | Lsys | Jammer | LVL   |
| (GHz)                            | (dB) | (dB)    | (dB)     | (dB) | (dBm)  | (dBm) |
| 2.4129                           | 11.8 | 16.4    | -6.6     | 2    | -46.6  | -0.2  |
| 2.41295                          | 11.9 | 16.4    | -6.5     | 2    | -46.5  | -0.1  |
| 2.413                            | 11.8 | 16.4    | -6.6     | 2    | -46.6  | -0.2  |
| 2.41305                          | 11.8 | 16.4    | -6.6     | 2    | -46.6  | -0.2  |
| 2.4131                           | 11.8 | 16.4    | -6.6     | 2    | -46.6  | -0.2  |
| 2.41315                          | 11.7 | 16.4    | -6.7     | 2    | -46.7  | -0.3  |
| 2.4132                           | 11.6 | 16.4    | -6.8     | 2    | -46.8  | -0.4  |
| 2.41325                          | 11.7 | 16.4    | -6.7     | 2    | -46.7  | -0.3  |
| 2.4133                           | 11.6 | 16.4    | -6.8     | 2    | -46.8  | -0.4  |
| 2.41335                          | 11.6 | 16.4    | -6.8     | 2    | 46.8   | -0.4  |
| 2.4134                           | 11.6 | 16.4    | -6.8     | 2    | -46.8  | -0.4  |
| 2.41345                          | 11.6 | 16.4    | -6.8     | 2    | -46.8  | -0.4  |
| 2.4135                           | 11.6 | 16.4    | -6.8     | 2    | -46.8  | -0.4  |
| 2.41355                          | 11.7 | 16.4    | -6.8     | 2    | -46.8  | -0.4  |
| 2.4136                           | 11.6 | 16.4    | -6.7     | 2    | -46.7  | -0.3  |
| 2.41365                          | 11.7 | 16.4    | -6.7     | 2    | -46.7  | -0.3  |
| 2.4137                           | 11.7 | 16.4    | -6.7     | 2    | -46.7  | -0.3  |
| 2.41375                          | 11.7 | 16.4    | -6.7     | 2    | -46.7  | -0.3  |
| 2.4138                           | 11.6 | 16.4    | -6.8     | 2    | -46.8  | -0.4  |
| 2.41385                          | 11.5 | 16.4    | -6.9     | 2    | -46.9  | -0.5  |
| 2.4139                           | 11.4 | 16.4    | -7       | 2    | -47    | -0.6  |
| 2.41395                          | 11.3 | 16.4    | -7.1     | 2    | -47.1  | -0.7  |
| 2.414                            | 11.2 | 16.4    | -7.2     | 2    | -47.2  | -0.8  |
| 2.41405                          | 11.2 | 16.4    | -7.2     | 2    | -47.2  | -0.8  |
| 2.4141                           | 11.2 | 16.4    | -7.2     | 2    | -47.2  | -0.8  |
| 2.41415                          | 11.2 | 16.4    | -7.2     | 2    | -47.2  | -0.8  |
| 2.4142                           | 11.3 | 16.4    | -7.1     | 2    | -47.1  | -0.7  |
| 2.41425                          | 11.4 | 16.4    | -7       | 2    | -47    | -0.6  |
| 2.4143                           | 11.5 | 16.4    | -6.9     | 2    | -46.9  | -0.5  |
| 2.41435                          | 11.5 | 16.4    | -6.9     | 2    | -46.9  | -0.5  |
| 2.4144                           | 11.5 | 16.4    | -6.9     | 2    | -46.9  | -0.5  |
| 2.41445                          | 11.5 | 16.4    | -6.9     | 2    | -46.9  | -0.5  |
| 2.4145                           | 11.4 | 16.4    | -7       | 2    | -47    | -0.6  |
| Processing Gain : 11.5 dB        |      |         |          |      |        |       |





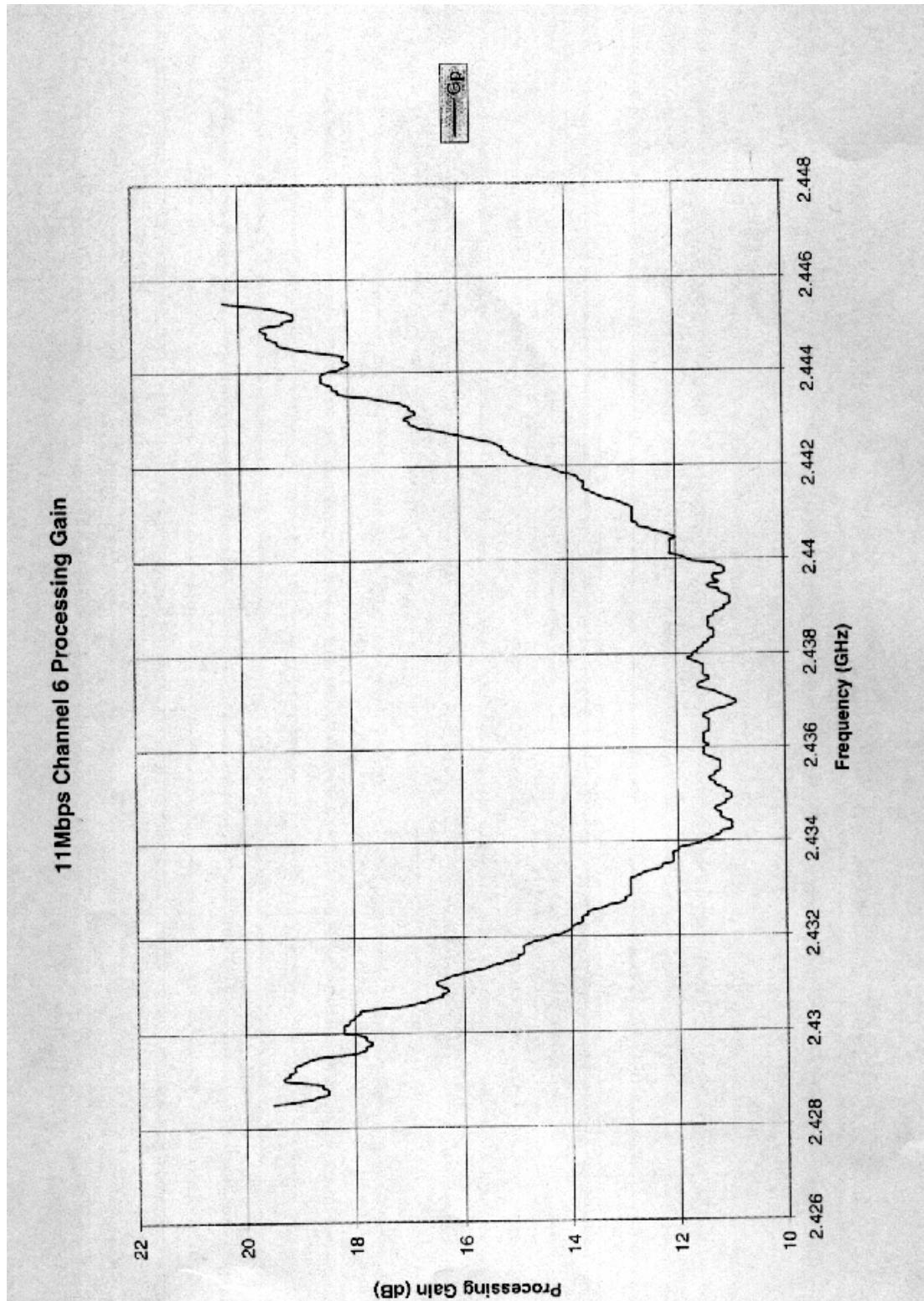
| 11Mbps CHANNEL 6 Processing Gain |      |         |          |      |        |       |
|----------------------------------|------|---------|----------|------|--------|-------|
| Gp = (S/N) ° + Mj + Lsys         |      |         |          |      |        |       |
| Freq.                            | Gp   | (S/N) ° | Mj = J/S | Lsys | Jammer | LVL   |
| (GHz)                            | (dB) | (dB)    | (dB)     | (dB) | (dBm)  | (dBm) |
| 2.4345                           | 11.2 | 16.4    | -7.2     | 2    | -47.2  | -3.1  |
| 2.43455                          | 11.2 | 16.4    | -7.2     | 2    | -47.2  | -3.1  |
| 2.4346                           | 11.2 | 16.4    | -7.2     | 2    | -47.2  | -3.1  |
| 2.43465                          | 11.3 | 16.4    | -7.1     | 2    | -47.1  | -3    |
| 2.4347                           | 11.3 | 16.4    | -7.1     | 2    | -47.1  | -3    |
| 2.43475                          | 11.2 | 16.4    | -7.2     | 2    | -47.2  | -3.1  |
| 2.4348                           | 11.1 | 16.4    | -7.3     | 2    | -47.3  | -3.2  |
| 2.43485                          | 11.1 | 16.4    | -7.3     | 2    | -47.3  | -3.2  |
| 2.4349                           | 11   | 16.4    | -7.4     | 2    | -47.4  | -3.3  |
| 2.43495                          | 11   | 16.4    | -7.4     | 2    | -47.4  | -3.3  |
| 2.435                            | 11   | 16.4    | -7.4     | 2    | -47.4  | -3.3  |
| 2.43505                          | 11.1 | 16.4    | -7.3     | 2    | -47.3  | -3.2  |
| 2.4351                           | 11.1 | 16.4    | -7.3     | 2    | -47.3  | -3.2  |
| 2.43515                          | 11.2 | 16.4    | -7.2     | 2    | -47.2  | -3.1  |
| 2.4352                           | 11.3 | 16.4    | -7.1     | 2    | -47.1  | -3    |
| 2.43525                          | 11.3 | 16.4    | -7.1     | 2    | -47.1  | -3    |
| 2.4353                           | 11.4 | 16.4    | -7       | 2    | -47    | -2.9  |
| 2.43535                          | 11.4 | 16.4    | -7       | 2    | -47    | -2.9  |
| 2.4354                           | 11.3 | 16.4    | -7.1     | 2    | -47.1  | -3    |
| 2.43545                          | 11.3 | 16.4    | -7.1     | 2    | -47.1  | -3    |
| 2.4355                           | 11.2 | 16.4    | -7.2     | 2    | -47.2  | -3.1  |
| 2.43555                          | 11.2 | 16.4    | -7.2     | 2    | -47.2  | -3.1  |
| 2.4356                           | 11.2 | 16.4    | -7.2     | 2    | -47.2  | -3.1  |
| 2.43565                          | 11.2 | 16.4    | -7.2     | 2    | -47.2  | -3.1  |
| 2.4357                           | 11.2 | 16.4    | -7.2     | 2    | -47.2  | -3.1  |
| 2.43575                          | 11.3 | 16.4    | -7.1     | 2    | -47.1  | -3    |
| 2.4358                           | 11.4 | 16.4    | -7       | 2    | -47    | -2.9  |
| 2.43585                          | 11.5 | 16.4    | -6.9     | 2    | -46.9  | -2.8  |
| 2.4359                           | 11.5 | 16.4    | -6.9     | 2    | -46.9  | -2.8  |
| 2.43595                          | 11.5 | 16.4    | -6.9     | 2    | -46.9  | -2.8  |
| 2.436                            | 11.5 | 16.4    | -6.9     | 2    | -46.9  | -2.8  |
| 2.43605                          | 11.4 | 16.4    | -7       | 2    | -47    | -2.9  |
| 2.4361                           | 11.5 | 16.4    | -6.9     | 2    | -46.9  | -2.8  |
| 2.43615                          | 11.5 | 16.4    | -6.9     | 2    | -46.9  | -2.8  |



| 11Mbps CHANNEL 6 Processing Gain |      |         |          |      |        |       |
|----------------------------------|------|---------|----------|------|--------|-------|
| Gp = (S/N) ° + Mj + Lsys         |      |         |          |      |        |       |
| Freq.                            | Gp   | (S/N) ° | Mj = J/S | Lsys | Jammer | LVL   |
| (GHz)                            | (dB) | (dB)    | (dB)     | (dB) | (dBm)  | (dBm) |
| 2.4362                           | 11.5 | 16.4    | -6.9     | 2    | -46.9  | -2.8  |
| 2.43625                          | 11.5 | 16.4    | -6.9     | 2    | -46.9  | -2.8  |
| 2.4363                           | 11.5 | 16.4    | -6.9     | 2    | -46.9  | -2.8  |
| 2.43635                          | 11.4 | 16.4    | -7       | 2    | -47    | -2.9  |
| 2.4364                           | 11.4 | 16.4    | -7       | 2    | -47    | -2.9  |
| 2.43645                          | 11.4 | 16.4    | -7       | 2    | -47    | -2.9  |
| 2.4365                           | 11.4 | 16.4    | -7       | 2    | -47    | -2.9  |
| 2.43655                          | 11.4 | 16.4    | -7       | 2    | -47    | -2.9  |
| 2.4366                           | 11.4 | 16.4    | -7       | 2    | -47    | -2.9  |
| 2.43665                          | 11.5 | 16.4    | -6.9     | 2    | -46.9  | -2.8  |
| 2.4367                           | 11.5 | 16.4    | -6.9     | 2    | -46.9  | -2.8  |
| 2.43675                          | 11.4 | 16.4    | -7       | 2    | -47    | -2.9  |
| 2.4368                           | 11.3 | 16.4    | -7.1     | 2    | -47.1  | -3    |
| 2.43685                          | 11.1 | 16.4    | -7.3     | 2    | -47.3  | -3.2  |
| 2.4369                           | 11   | 16.4    | -7.4     | 2    | -47.4  | -3.3  |
| 2.43695                          | 10.9 | 16.4    | -7.5     | 2    | -47.5  | -3.4  |
| 2.437                            | 10.9 | 16.4    | -7.5     | 2    | -47.5  | -3.4  |
| 2.43705                          | 11   | 16.4    | -7.4     | 2    | -47.4  | -3.3  |
| 2.4371                           | 11.1 | 16.4    | -7.3     | 2    | -47.3  | -3.2  |
| 2.43715                          | 11.2 | 16.4    | -7.2     | 2    | -47.2  | -3.1  |
| 2.4372                           | 11.3 | 16.4    | -7.1     | 2    | -47.1  | -3    |
| 2.43725                          | 11.5 | 16.4    | -6.9     | 2    | -46.9  | -2.8  |
| 2.4373                           | 11.6 | 16.4    | -6.8     | 2    | -46.8  | -2.7  |
| 2.43735                          | 11.6 | 16.4    | -6.8     | 2    | -46.8  | -2.7  |
| 2.4374                           | 11.5 | 16.4    | -6.9     | 2    | -46.9  | -2.8  |
| 2.43745                          | 11.4 | 16.4    | -7       | 2    | -47    | -2.9  |
| 2.4375                           | 11.4 | 16.4    | -7       | 2    | -47    | -2.9  |
| 2.43755                          | 11.5 | 16.4    | -6.9     | 2    | -46.9  | -2.8  |
| 2.4376                           | 11.5 | 16.4    | -6.9     | 2    | -46.9  | -2.8  |
| 2.43765                          | 11.5 | 16.4    | -6.9     | 2    | -46.9  | -2.8  |
| 2.4377                           | 11.5 | 16.4    | -6.9     | 2    | -46.9  | -2.8  |
| 2.43775                          | 11.5 | 16.4    | -6.9     | 2    | -46.9  | -2.8  |
| 2.4378                           | 11.6 | 16.4    | -6.8     | 2    | -46.8  | -2.7  |
| 2.43785                          | 11.7 | 16.4    | -6.7     | 2    | -46.7  | -2.6  |



| 11Mbps CHANNEL 6 Processing Gain |      |         |          |      |        |       |
|----------------------------------|------|---------|----------|------|--------|-------|
| Gp = (S/N) ° + Mj + Lsys         |      |         |          |      |        |       |
| Freq.                            | Gp   | (S/N) ° | Mj = J/S | Lsys | Jammer | LVL   |
| (GHz)                            | (dB) | (dB)    | (dB)     | (dB) | (dBm)  | (dBm) |
| 2.4379                           | 11.8 | 16.4    | -6.6     | 2    | -46.6  | -2.5  |
| 2.43795                          | 11.7 | 16.4    | -6.7     | 2    | -46.7  | -2.6  |
| 2.438                            | 11.7 | 16.4    | -6.7     | 2    | -46.7  | -2.6  |
| 2.43805                          | 11.6 | 16.4    | -6.8     | 2    | -46.8  | -2.7  |
| 2.4381                           | 11.6 | 16.4    | -6.8     | 2    | -46.8  | -2.7  |
| 2.43815                          | 11.5 | 16.4    | -6.9     | 2    | -46.9  | -2.8  |
| 2.4382                           | 11.5 | 16.4    | -6.9     | 2    | -46.9  | -2.8  |
| 2.43825                          | 11.4 | 16.4    | -7       | 2    | -47    | -2.9  |
| 2.4383                           | 11.4 | 16.4    | -7       | 2    | -47    | -2.9  |
| 2.43835                          | 11.3 | 16.4    | -7.1     | 2    | -47.1  | -3    |
| 2.4384                           | 11.3 | 16.4    | -7.1     | 2    | -47.1  | -3    |
| 2.43845                          | 11.3 | 16.4    | -7.1     | 2    | -47.1  | -3    |
| 2.4385                           | 11.3 | 16.4    | -7.1     | 2    | -47.1  | -3    |
| 2.43855                          | 11.4 | 16.4    | -7       | 2    | -47    | -2.9  |
| 2.4386                           | 11.4 | 16.4    | -7       | 2    | -47    | -2.9  |
| 2.43865                          | 11.4 | 16.4    | -7       | 2    | -47    | -2.9  |
| 2.4387                           | 11.4 | 16.4    | -7       | 2    | -47    | -2.9  |
| 2.43875                          | 11.4 | 16.4    | -7       | 2    | -47    | -2.9  |
| 2.4388                           | 11.3 | 16.4    | -7.1     | 2    | -47.1  | -3    |
| 2.43885                          | 11.3 | 16.4    | -7.1     | 2    | -47.1  | -3    |
| 2.4389                           | 11.2 | 16.4    | -7.2     | 2    | -47.2  | -3.1  |
| 2.4895                           | 11.1 | 16.4    | -7.3     | 2    | -47.3  | -3.2  |
| 2.439                            | 11.1 | 16.4    | -7.3     | 2    | -47.3  | -3.2  |
| 2.43905                          | 11   | 16.4    | -7.4     | 2    | -47.4  | -3.3  |
| 2.4391                           | 11   | 16.4    | -7.4     | 2    | -47.4  | -3.3  |
| 2.43915                          | 11   | 16.4    | -7.4     | 2    | -47.4  | -3.3  |
| 2.4392                           | 11   | 16.4    | -7.4     | 2    | -47.4  | -3.3  |
| 2.43925                          | 11.1 | 16.4    | -7.3     | 2    | -47.3  | -3.2  |
| 2.4393                           | 11.2 | 16.4    | -7.2     | 2    | -47.2  | -3.1  |
| 2.43935                          | 11.2 | 16.4    | -7.2     | 2    | -47.2  | -3.1  |
| 2.4394                           | 11.4 | 16.4    | -7       | 2    | -47    | -2.9  |
| 2.43945                          | 11.4 | 16.4    | -7       | 2    | -47    | -2.9  |
| 2.4395                           | 11.2 | 16.4    | -7.2     | 2    | -47.2  | -3.1  |
| Processing Gain : 11.4 dB        |      |         |          |      |        |       |





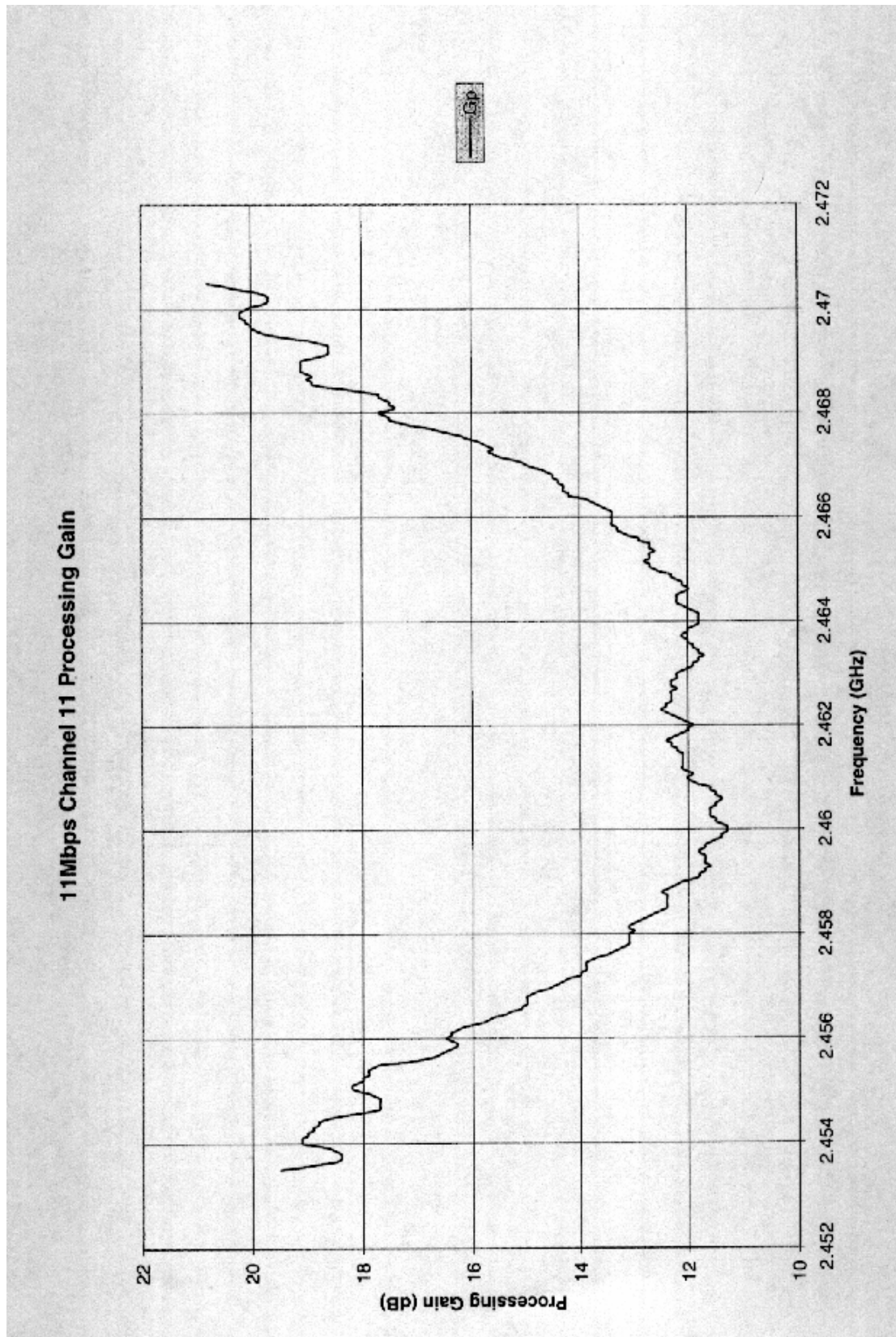
| 11Mbps CHANNEL 11 Processing Gain   |      |               |          |      |        |       |
|-------------------------------------|------|---------------|----------|------|--------|-------|
| $G_p = (S/N) \circ + M_j + L_{sys}$ |      |               |          |      |        |       |
| Freq.                               | Gp   | (S/N) $\circ$ | Mj = J/S | Lsys | Jammer | LVL   |
| (GHz)                               | (dB) | (dB)          | (dB)     | (dB) | (dBm)  | (dBm) |
| 2.4595                              | 11.7 | 16.4          | -6.7     | 2    | -46.7  | -4.9  |
| 2.45955                             | 11.8 | 16.4          | -6.6     | 2    | -46.6  | -4.8  |
| 5.4596                              | 11.8 | 16.4          | -6.6     | 2    | -46.6  | -4.8  |
| 2.45965                             | 11.7 | 16.4          | -6.7     | 2    | -46.7  | -4.9  |
| 2.4597                              | 11.7 | 16.4          | -6.7     | 2    | -46.7  | -4.9  |
| 2.45975                             | 11.6 | 16.4          | -6.8     | 2    | -46.8  | -5    |
| 2.4598                              | 11.5 | 16.4          | -6.9     | 2    | -46.9  | -5.1  |
| 2.45985                             | 11.4 | 16.4          | -7       | 2    | -47    | -5.2  |
| 2.4599                              | 11.4 | 16.4          | -7       | 2    | -47    | -5.2  |
| 2.45995                             | 11.3 | 16.4          | -7.1     | 2    | -47.1  | -5.3  |
| 2.46                                | 11.3 | 16.4          | -7.1     | 2    | -47.1  | -5.3  |
| 2.46005                             | 11.3 | 16.4          | -7.1     | 2    | -47.1  | -5.3  |
| 2.4601                              | 11.4 | 16.4          | -7       | 2    | -47    | -5.2  |
| 2.46015                             | 11.5 | 16.4          | -6.9     | 2    | -46.9  | -5.1  |
| 2.4602                              | 11.5 | 16.4          | -6.9     | 2    | -46.9  | -5.1  |
| 2.46025                             | 11.6 | 16.4          | -6.8     | 2    | -46.8  | -5    |
| 2.4603                              | 11.6 | 16.4          | -6.8     | 2    | -46.8  | -5    |
| 2.46035                             | 11.6 | 16.4          | -6.8     | 2    | -46.8  | -5    |
| 2.4604                              | 11.6 | 16.4          | -6.8     | 2    | -46.8  | -5    |
| 2.46045                             | 11.5 | 16.4          | -6.9     | 2    | -46.9  | -5.1  |
| 2.4605                              | 11.5 | 16.4          | -6.9     | 2    | -46.9  | -5.1  |
| 2.46055                             | 11.4 | 16.4          | -7       | 2    | -47    | -5.2  |
| 2.4606                              | 11.4 | 16.4          | -7       | 2    | -47    | -5.2  |
| 2.46065                             | 11.5 | 16.4          | -6.9     | 2    | -46.9  | -5.1  |
| 2.4607                              | 11.5 | 16.4          | -6.9     | 2    | -46.9  | -5.1  |
| 2.46075                             | 11.6 | 16.4          | -6.8     | 2    | -46.8  | -5    |
| 2.4608                              | 11.6 | 16.4          | -6.8     | 2    | -46.8  | -5    |
| 2.46085                             | 11.8 | 16.4          | -6.6     | 2    | -46.6  | -4.8  |
| 2.4609                              | 11.9 | 16.4          | -6.5     | 2    | -46.5  | -4.7  |
| 2.46095                             | 12   | 16.4          | -6.4     | 2    | -46.4  | -4.6  |
| 2.461                               | 12   | 16.4          | -6.4     | 2    | -46.4  | -4.6  |
| 2.46105                             | 11.9 | 16.4          | -6.5     | 2    | -46.5  | -4.7  |
| 2.4611                              | 12   | 16.4          | -6.4     | 2    | -46.4  | -4.6  |
| 2.46115                             | 12.1 | 16.4          | -6.3     | 2    | -46.3  | -4.5  |



| 11Mbps CHANNEL 11 Processing Gain   |      |               |          |      |        |       |
|-------------------------------------|------|---------------|----------|------|--------|-------|
| $G_p = (S/N) \circ + M_j + L_{sys}$ |      |               |          |      |        |       |
| Freq.                               | Gp   | (S/N) $\circ$ | Mj = J/S | Lsys | Jammer | LVL   |
| (GHz)                               | (dB) | (dB)          | (dB)     | (dB) | (dBm)  | (dBm) |
| 2.4612                              | 12.1 | 16.4          | -6.3     | 2    | -46.3  | -4.5  |
| 2.46125                             | 12.1 | 16.4          | -6.3     | 2    | -46.3  | -4.5  |
| 2.4613                              | 12.1 | 16.4          | -6.3     | 2    | -46.3  | -4.5  |
| 2.46135                             | 12.1 | 16.4          | -6.3     | 2    | -46.3  | -4.5  |
| 2.4614                              | 12.1 | 16.4          | -6.3     | 2    | -46.3  | -4.5  |
| 2.46145                             | 12.1 | 16.4          | -6.3     | 2    | -46.3  | -4.5  |
| 2.4615                              | 12.2 | 16.4          | -6.2     | 2    | -46.2  | -4.4  |
| 2.46155                             | 12.2 | 16.4          | -6.2     | 2    | -46.2  | -4.4  |
| 2.4616                              | 12.3 | 16.4          | -6.1     | 2    | -46.1  | -4.3  |
| 2.46165                             | 12.3 | 16.4          | -6.1     | 2    | -46.1  | -4.3  |
| 2.4617                              | 12.4 | 16.4          | -6       | 2    | -46    | -4.2  |
| 2.46175                             | 12.3 | 16.4          | -6.1     | 2    | -46.1  | -4.3  |
| 2.4618                              | 12.2 | 16.4          | -6.2     | 2    | -46.2  | -4.4  |
| 2.46185                             | 12.1 | 16.4          | -6.3     | 2    | -46.3  | -4.5  |
| 2.4619                              | 12   | 16.4          | -6.4     | 2    | -46.4  | -4.6  |
| 2.46195                             | 12   | 16.4          | -6.4     | 2    | -46.4  | -4.6  |
| 2.462                               | 11.9 | 16.4          | -6.5     | 2    | -46.5  | -4.7  |
| 2.46205                             | 12   | 16.4          | -6.4     | 2    | -46.4  | -4.6  |
| 2.4621                              | 12.1 | 16.4          | -6.3     | 2    | -46.3  | -4.5  |
| 2.46215                             | 12.2 | 16.4          | -6.2     | 2    | -46.2  | -4.4  |
| 2.4622                              | 12.3 | 16.4          | -6.1     | 2    | -46.1  | -4.3  |
| 2.46225                             | 12.4 | 16.4          | -6       | 2    | -46    | -4.2  |
| 2.4623                              | 12.5 | 16.4          | -5.9     | 2    | -45.9  | -4.1  |
| 2.46235                             | 12.4 | 16.4          | -6       | 2    | -46    | -4.2  |
| 2.4624                              | 12.4 | 16.4          | -6       | 2    | -46    | -4.2  |
| 2.46245                             | 12.3 | 16.4          | -6.1     | 2    | -46.1  | -4.3  |
| 2.4625                              | 12.3 | 16.4          | -6.1     | 2    | -46.1  | -4.3  |
| 2.46255                             | 12.3 | 16.4          | -6.1     | 2    | -46.1  | -4.3  |
| 2.4626                              | 12.3 | 16.4          | -6.1     | 2    | -46.1  | -4.3  |
| 2.46265                             | 12.3 | 16.4          | -6.1     | 2    | -46.1  | -4.3  |
| 2.4627                              | 12.2 | 16.4          | -6.2     | 2    | -46.2  | -4.4  |
| 2.46275                             | 12.3 | 16.4          | -6.1     | 2    | -46.1  | -4.3  |
| 2.4628                              | 12.3 | 16.4          | -6.1     | 2    | -46.1  | -4.3  |
| 2.46285                             | 12.3 | 16.4          | -6.1     | 2    | -46.1  | -4.3  |



| 11Mbps CHANNEL 11 Processing Gain   |      |               |          |      |        |       |
|-------------------------------------|------|---------------|----------|------|--------|-------|
| $G_p = (S/N) \circ + M_j + L_{sys}$ |      |               |          |      |        |       |
| Freq.                               | Gp   | (S/N) $\circ$ | Mj = J/S | Lsys | Jammer | LVL   |
| (GHz)                               | (dB) | (dB)          | (dB)     | (dB) | (dBm)  | (dBm) |
| 2.4629                              | 12.2 | 16.4          | -6.2     | 2    | -46.2  | -4.4  |
| 2.46295                             | 12.2 | 16.4          | -6.2     | 2    | -46.2  | -4.4  |
| 2.463                               | 12.2 | 16.4          | -6.2     | 2    | -46.2  | -4.4  |
| 2.46305                             | 12.1 | 16.4          | -6.3     | 2    | -46.3  | -4.5  |
| 2.4631                              | 12   | 16.4          | -6.4     | 2    | -46.4  | -4.6  |
| 2.46315                             | 11.9 | 16.4          | -6.5     | 2    | -46.5  | -4.7  |
| 2.4632                              | 11.9 | 16.4          | -6.5     | 2    | -46.5  | -4.7  |
| 2.46325                             | 11.8 | 16.4          | -6.6     | 2    | -46.6  | -4.8  |
| 2.4633                              | 11.8 | 16.4          | -6.6     | 2    | -46.6  | -4.8  |
| 2.46335                             | 11.7 | 16.4          | -6.7     | 2    | -46.7  | -4.9  |
| 2.4634                              | 11.8 | 16.4          | -6.6     | 2    | -46.6  | -4.8  |
| 2.46345                             | 11.8 | 16.4          | -6.6     | 2    | -46.6  | -4.8  |
| 2.4635                              | 11.9 | 16.4          | -6.5     | 2    | -46.5  | -4.7  |
| 2.46355                             | 11.9 | 16.4          | -6.5     | 2    | -46.5  | -4.7  |
| 2.4636                              | 12   | 16.4          | -6.4     | 2    | -46.4  | -4.6  |
| 2.46365                             | 12   | 16.4          | -6.4     | 2    | -46.4  | -4.6  |
| 2.4637                              | 12.1 | 16.4          | -6.3     | 2    | -46.3  | -4.5  |
| 2.46375                             | 12.1 | 16.4          | -6.3     | 2    | -46.3  | -4.5  |
| 2.4638                              | 12   | 16.4          | -6.4     | 2    | -46.4  | -4.6  |
| 2.46385                             | 12   | 16.4          | -6.4     | 2    | -46.4  | -4.6  |
| 2.4639                              | 11.9 | 16.4          | -6.5     | 2    | -46.5  | -4.7  |
| 2.46395                             | 11.8 | 16.4          | -6.6     | 2    | -46.6  | -4.8  |
| 2.464                               | 11.8 | 16.4          | -6.6     | 2    | -46.6  | -4.8  |
| 2.46405                             | 11.8 | 16.4          | -6.6     | 2    | -46.6  | -4.8  |
| 2.4641                              | 11.8 | 16.4          | -6.6     | 2    | -46.6  | -4.8  |
| 2.46415                             | 11.8 | 16.4          | -6.6     | 2    | -46.6  | -4.8  |
| 2.4642                              | 11.9 | 16.4          | -6.5     | 2    | -46.5  | -4.7  |
| 2.46425                             | 12   | 16.4          | -6.4     | 2    | -46.4  | -4.6  |
| 2.4643                              | 12.1 | 16.4          | -6.3     | 2    | -46.3  | -4.5  |
| 2.46435                             | 12.2 | 16.4          | -6.2     | 2    | -46.2  | -4.4  |
| 4.4644                              | 12.2 | 16.4          | -6.2     | 2    | -46.2  | -4.4  |
| 2.46445                             | 12.2 | 16.4          | -6.2     | 2    | -46.2  | -4.4  |
| 2.4645                              | 12.2 | 16.4          | -6.2     | 2    | -46.2  | -4.4  |
| Processing Gain : 12 dB             |      |               |          |      |        |       |





| 2Mbps CHANNEL 6 Processing Gain     |      |               |          |      |        |       |
|-------------------------------------|------|---------------|----------|------|--------|-------|
| $G_p = (S/N) \circ + M_j + L_{sys}$ |      |               |          |      |        |       |
| Freq.                               | Gp   | (S/N) $\circ$ | Mj = J/S | Lsys | Jammer | LVL   |
| (GHz)                               | (dB) | (dB)          | (dB)     | (dB) | (dBm)  | (dBm) |
| 2.4345                              | 12.1 | 13.3          | -3.2     | 2    | -43.2  | 0.5   |
| 2.43455                             | 12.7 | 13.3          | -2.6     | 2    | -42.6  | 1.1   |
| 2.4346                              | 12.9 | 13.3          | -2.4     | 2    | -42.4  | 1.3   |
| 2.43465                             | 13   | 13.3          | -2.3     | 2    | -42.3  | 1.4   |
| 2.4347                              | 13   | 13.3          | -2.3     | 2    | -42.3  | 1.4   |
| 2.43475                             | 12.9 | 13.3          | -2.4     | 2    | -42.4  | 1.3   |
| 2.4348                              | 13.1 | 13.3          | -2.2     | 2    | -42.2  | 1.5   |
| 2.43485                             | 12.4 | 13.3          | -2.9     | 2    | -42.9  | 0.8   |
| 2.4349                              | 12.1 | 13.3          | -3.2     | 2    | -43.2  | 0.5   |
| 2.43495                             | 12.6 | 13.3          | -2.7     | 2    | -42.7  | 1     |
| 2.435                               | 12.6 | 13.3          | -2.7     | 2    | -42.7  | 1     |
| 2.43505                             | 12.5 | 13.3          | -2.8     | 2    | -42.8  | 0.9   |
| 2.4351                              | 12.4 | 13.3          | -2.9     | 2    | -42.9  | 0.8   |
| 2.43515                             | 12.4 | 13.3          | -2.9     | 2    | -42.9  | 0.8   |
| 2.4352                              | 12.2 | 13.3          | -3.1     | 2    | -43.1  | 0.6   |
| 2.43525                             | 12.2 | 13.3          | -3.1     | 2    | -43.7  | 0.6   |
| 2.4353                              | 12.3 | 13.3          | -3       | 2    | -43    | 0.7   |
| 2.43535                             | 11.9 | 13.3          | -3.4     | 2    | -43.4  | 0.3   |
| 2.4354                              | 11.5 | 13.3          | -3.8     | 2    | -43.8  | -0.1  |
| 2.43545                             | 12.1 | 13.3          | -3.2     | 2    | -43.2  | 0.5   |
| 2.4355                              | 11.5 | 13.3          | -3.8     | 2    | -43.8  | -0.1  |
| 2.43555                             | 12.4 | 13.3          | -2.9     | 2    | -42.9  | 0.8   |
| 2.4356                              | 12.7 | 13.3          | -2.6     | 2    | -42.6  | 1.1   |
| 2.43565                             | 12.9 | 13.3          | -2.4     | 2    | -42.4  | 1.3   |
| 2.4357                              | 12.8 | 13.3          | -2.5     | 2    | -42.5  | 1.2   |
| 5.43575                             | 12.8 | 13.3          | -2.5     | 2    | -42.5  | 1.2   |
| 2.4358                              | 12.9 | 13.3          | -2.4     | 2    | -42.4  | 1.3   |
| 2.43585                             | 12.1 | 13.3          | -3.2     | 2    | -43.2  | 0.5   |
| 2.4359                              | 11.7 | 13.3          | -3.6     | 2    | -43.6  | 0.1   |
| 2.43595                             | 12.4 | 13.3          | -2.9     | 2    | -42.9  | 0.8   |
| 2.436                               | 12.5 | 13.3          | -2.8     | 2    | -42.8  | 0.9   |
| 2.43605                             | 12.5 | 13.3          | -2.8     | 2    | -42.8  | 0.9   |
| 2.4361                              | 12.4 | 13.3          | -2.9     | 2    | -42.9  | 0.8   |
| 2.43615                             | 12.4 | 13.3          | -2.9     | 2    | -42.9  | 0.8   |



| 2Mbps CHANNEL 6 Processing Gain     |      |               |          |      |        |       |
|-------------------------------------|------|---------------|----------|------|--------|-------|
| $G_p = (S/N) \circ + M_j + L_{sys}$ |      |               |          |      |        |       |
| Freq.                               | Gp   | (S/N) $\circ$ | Mj = J/S | Lsys | Jammer | LVL   |
| (GHz)                               | (dB) | (dB)          | (dB)     | (dB) | (dBm)  | (dBm) |
| 2.4362                              | 12.1 | 13.3          | -3.2     | 2    | -43.2  | 0.5   |
| 2.43625                             | 12.1 | 13.3          | -3.2     | 2    | -43.2  | 0.5   |
| 2.4363                              | 12.1 | 13.3          | -3.2     | 2    | -43.2  | 0.5   |
| 2.43635                             | 11.5 | 13.3          | -3.8     | 2    | -43.8  | -0.1  |
| 2.4364                              | 11.1 | 13.3          | -4.2     | 2    | -44.2  | -0.5  |
| 2.43645                             | 11.7 | 13.3          | -3.6     | 2    | -43.6  | 0.1   |
| 2.4365                              | 11.2 | 13.3          | -4.1     | 2    | -44.1  | -0.4  |
| 2.43655                             | 12.6 | 13.3          | -2.7     | 2    | -42.7  | 1     |
| 2.4366                              | 13.1 | 13.3          | -2.2     | 2    | -42.2  | 1.5   |
| 2.43665                             | 13.7 | 13.3          | -1.6     | 2    | -41.6  | 2.1   |
| 2.4367                              | 14.1 | 13.3          | -1.2     | 2    | -41.2  | 2.5   |
| 2.43675                             | 15.1 | 13.3          | -0.2     | 2    | -40.2  | 3.5   |
| 2.4368                              | 15.7 | 13.3          | 0.4      | 2    | -39.6  | 4.1   |
| 2.43685                             | 16.2 | 13.3          | 0.9      | 2    | -39.1  | 4.6   |
| 2.4369                              | 16.1 | 13.3          | 0.8      | 2    | -39.2  | 4.5   |
| 2.43695                             | 16.3 | 13.3          | 1        | 2    | -39    | 4.7   |
| 2.437                               | 16.6 | 13.3          | 1.3      | 2    | -38.7  | 5     |
| 2.43705                             | 16.3 | 13.3          | 1        | 2    | -39    | 4.7   |
| 2.4371                              | 16.3 | 13.3          | 1        | 2    | -39    | 4.7   |
| 2.43715                             | 16   | 13.3          | 0.7      | 2    | -39.3  | 4.4   |
| 2.4372                              | 15.5 | 13.3          | 0.2      | 2    | -39.8  | 3.9   |
| 2.43725                             | 14.8 | 13.3          | -0.5     | 2    | -40.5  | 3.2   |
| 2.4373                              | 14   | 13.3          | -1.3     | 2    | -41.3  | 2.4   |
| 2.43735                             | 13.5 | 13.3          | -1.8     | 2    | -41.8  | 1.9   |
| 2.4374                              | 12.7 | 13.3          | -2.6     | 2    | -42.6  | 1.1   |
| 2.43745                             | 12.6 | 13.3          | -2.7     | 2    | -42.7  | 1     |
| 2.4375                              | 11.6 | 13.3          | -3.7     | 2    | -43.7  | 0     |
| 2.43755                             | 12.1 | 13.3          | -3.2     | 2    | -43.2  | 0.5   |
| 2.4376                              | 12.1 | 13.3          | -3.2     | 2    | -43.2  | 0.5   |
| 2.43765                             | 12.1 | 13.3          | -3.2     | 2    | -43.2  | 0.5   |
| 2.4377                              | 12   | 13.3          | -3.3     | 2    | -43.3  | 0.4   |
| 2.43775                             | 11.7 | 13.3          | -3.6     | 2    | -43.6  | 0.1   |
| 2.4378                              | 12   | 13.3          | -3.3     | 2    | -43.3  | 0.4   |
| 2.43785                             | 11.1 | 13.3          | -4.2     | 2    | -44.2  | -0.5  |



| 2Mbps CHANNEL 6 Processing Gain     |      |               |          |      |        |       |
|-------------------------------------|------|---------------|----------|------|--------|-------|
| $G_p = (S/N) \circ + M_j + L_{sys}$ |      |               |          |      |        |       |
| Freq.                               | Gp   | (S/N) $\circ$ | Mj = J/S | Lsys | Jammer | LVL   |
| (GHz)                               | (dB) | (dB)          | (dB)     | (dB) | (dBm)  | (dBm) |
| 2.4379                              | 11.2 | 13.3          | -4.1     | 2    | -44.1  | -0.4  |
| 2.43795                             | 12.1 | 13.3          | -3.2     | 2    | -43.2  | 0.5   |
| 2.438                               | 12.5 | 13.3          | -2.8     | 2    | -42.8  | 0.9   |
| 2.43805                             | 12.7 | 13.3          | -2.6     | 2    | -42.6  | 1.1   |
| 2.4381                              | 12.8 | 13.3          | -2.5     | 2    | -42.5  | 1.2   |
| 2.43815                             | 12.9 | 13.3          | -2.4     | 2    | -42.4  | 1.3   |
| 2.4382                              | 12.9 | 13.3          | -2.4     | 2    | -42.4  | 1.3   |
| 2.43825                             | 12.9 | 13.3          | -2.4     | 2    | -42.4  | 1.3   |
| 2.4383                              | 12.8 | 13.3          | -2.5     | 2    | -42.5  | 1.2   |
| 2.43835                             | 12.6 | 13.3          | -2.7     | 2    | -42.7  | 1     |
| 2.4384                              | 12   | 13.3          | -3.3     | 2    | -43.3  | 0.4   |
| 2.43845                             | 12.4 | 13.3          | -2.9     | 2    | -42.9  | 0.8   |
| 2.4385                              | 11.7 | 13.3          | -3.6     | 2    | -43.6  | 0.1   |
| 2.43855                             | 12.3 | 13.3          | -3       | 2    | -43    | 0.7   |
| 2.4386                              | 12.3 | 13.3          | -3       | 2    | -43    | 0.7   |
| 2.43865                             | 12.3 | 13.3          | -3       | 2    | -43    | 0.7   |
| 2.4387                              | 12.2 | 13.3          | -3.1     | 2    | -43.1  | 0.6   |
| 2.43875                             | 12   | 13.3          | -3.3     | 2    | -43.3  | 0.4   |
| 2.4388                              | 12.3 | 13.3          | -3       | 2    | -43    | 0.7   |
| 2.43885                             | 11.6 | 13.3          | -3.7     | 2    | -43.7  | 0     |
| 2.4389                              | 11.6 | 13.3          | -3.7     | 2    | -43.7  | 0     |
| 2.43895                             | 12.4 | 13.3          | -2.9     | 2    | -42.9  | 0.8   |
| 2.439                               | 12.7 | 13.3          | -2.6     | 2    | -42.6  | 1.1   |
| 2.43905                             | 12.7 | 13.3          | -2.6     | 2    | -42.6  | 1.1   |
| 2.4391                              | 12.8 | 13.3          | -2.5     | 2    | -42.5  | 1.2   |
| 2.43915                             | 12.9 | 13.3          | -2.4     | 2    | -42.4  | 1.3   |
| 2.4392                              | 12.8 | 13.3          | -2.5     | 2    | -42.5  | 1.2   |
| 2.43925                             | 12.9 | 13.3          | -2.4     | 2    | -42.4  | 1.3   |
| 2.4393                              | 12.8 | 13.3          | -2.5     | 2    | -42.5  | 1.2   |
| 2.43935                             | 12.6 | 13.3          | -2.7     | 2    | -42.7  | 1     |
| 2.4394                              | 12.3 | 13.3          | -3       | 2    | -43    | 0.7   |
| 2.43945                             | 12.5 | 13.3          | -2.8     | 2    | -42.8  | 0.9   |
| 2.4395                              | 12   | 13.3          | -3.3     | 2    | -43.3  | 0.4   |
| Processing Gain : 12.5 dB           |      |               |          |      |        |       |

