

(30MHz-1000MHz)

|                           | erature:                                  | 24.7°C   |  | Relative I                           | Humidity:                           | 61%                    |                    |  |  |  |
|---------------------------|---|--|--|--------------------------------------|-------------------------------------|------------------------|--------------------|--|--|--|
| ēst V                     | oltage:                                   | DC 3.7V  |  | Phase:                               |                                     | Horizontal             |                    |  |  |  |
| est N                     | lode:                                     | 802.11b(wo   | 1b(worst)  |                                      |                                     |                        |                    |  |  |  |
| 0.0                       | dBuV                                      |  |  |                                      |                                     |                        |                    |  |  |  |
|                           | 14 14                                     |  | * 4  | 14                                   | 3                                   |                        |                    |  |  |  |
|                           |   |  |  |                                      |                                     |                        |                    |  |  |  |
|                           |   |  |  |                                      |                                     |                        |                    |  |  |  |
|                           |   | ſ  |  |                                      | 4                                   |                        | 6                  |  |  |  |
| _                         |   |  | Ž I  | X                                    |                                     | 5X                     |                    |  |  |  |
|                           |   |  |  |                                      |                                     |                        |                    |  |  |  |
| 0 Davier                  |   |  | - All  |                                      |                                     |                        |                    |  |  |  |
|                           | The The And                               |  | WWWWWWWWWWWWWWW                                  | 1 mapping                            |                                     | line and in the        | MANA               |  |  |  |
| 0                         | married and and                           | malling  | Water Will Wall                                  | March Alley January                  | MI M                                | Minth production       |                    |  |  |  |
|                           | mundhadrager tot                          | www.lawy   | Manun M.M. M.M.                                  | haren Alter                          | wr y                                | hhipitayon farwahan    |                    |  |  |  |
| 10                        | Martin and and                            |  | Water and Will Will Will Will Will Will Will Wil | well for many                        |                                     |                        |                    |  |  |  |
| 10                        |   | M  | War William                                      |                                      | 300.00                              |                        |                    |  |  |  |
|                           | 0   | 60.00  |  |                                      |                                     |                        |                    |  |  |  |
| 10                        | 0<br>Frequency                            | M I I   60.00 I I  | Correct  | Result                               | Limit                               | Margin                 | 1000.00            |  |  |  |
| 10<br>20<br>30.000<br>No. | 0<br>Frequency<br>(MHz)                   | M I I   60.00 I I   Reading (dBuV)   | Correct<br>Factor(dB/m)                          | Result<br>(dBuV/m)                   | Limit<br>(dBuV/m)                   | (dB)                   | Remark             |  |  |  |
| 10<br>20<br>30.000        | Frequency<br>(MHz)<br>80.9274             | M I I   60.00 I <td>Correct<br/>Factor(dB/m)<br/>-32.26</td> <td>Result<br/>(dBuV/m)<br/>35.35</td> <td>Limit<br/>(dBuV/m)<br/>40.00</td> <td>(dB)<br/>-4.65</td> <td></td>              | Correct<br>Factor(dB/m)<br>-32.26                | Result<br>(dBuV/m)<br>35.35          | Limit<br>(dBuV/m)<br>40.00          | (dB)<br>-4.65          |                    |  |  |  |
| 30.000                    | 0<br>Frequency<br>(MHz)                   | M I I   60.00 I I   Reading (dBuV)   | Correct<br>Factor(dB/m)                          | Result<br>(dBuV/m)                   | Limit<br>(dBuV/m)                   | (dB)                   | Remark             |  |  |  |
| 0<br>30.000<br>No.        | Frequency<br>(MHz)<br>80.9274             | M I I   60.00 I <td>Correct<br/>Factor(dB/m)<br/>-32.26</td> <td>Result<br/>(dBuV/m)<br/>35.35</td> <td>Limit<br/>(dBuV/m)<br/>40.00</td> <td>(dB)<br/>-4.65</td> <td>Remark<br/>QP</td> | Correct<br>Factor(dB/m)<br>-32.26                | Result<br>(dBuV/m)<br>35.35          | Limit<br>(dBuV/m)<br>40.00          | (dB)<br>-4.65          | Remark<br>QP       |  |  |  |
| 10<br>20<br>30.000<br>No. | Frequency<br>(MHz)<br>80.9274<br>113.3161 | M I I   I I I   60.00 I I   Reading I I   (dBuV) 67.61 67.00   | Correct<br>Factor(dB/m)<br>-32.26<br>-32.29      | Result<br>(dBuV/m)<br>35.35<br>34.71 | Limit<br>(dBuV/m)<br>40.00<br>43.50 | (dB)<br>-4.65<br>-8.79 | Remark<br>QP<br>QP |  |  |  |

Note: 1. Margin = Result (Result = Reading + Factor )-Limit

67.46

70.35

2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.

-31.95

-31.66

35.51

38.69

46.00

46.00

- 10.49

-7.31

QP

QP

3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

Flux Compliance Service Laboratory

454.3100

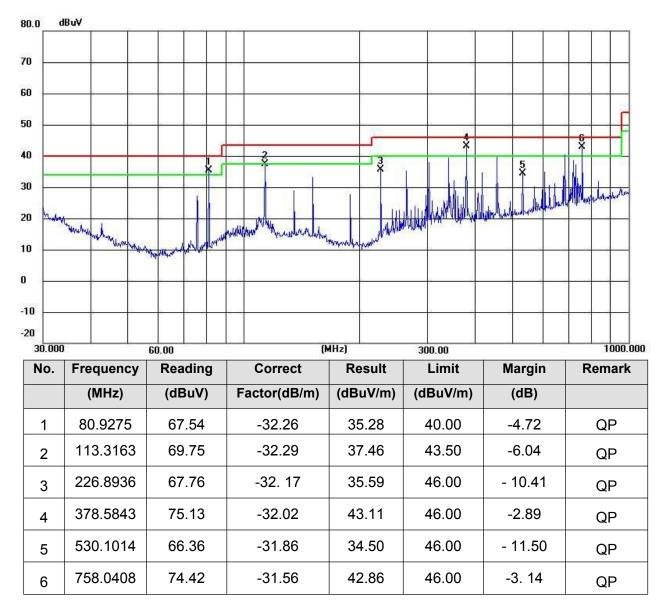
682.3482

5

6



| Temperature:  | 22.7°C         | Relative Humidity: | 61%      |
|---------------|----------------|--------------------|----------|
| Test Voltage: | DC 3.7V        | Phase:             | Vertical |
| Test Mode:    | 802.11b(worst) |                    |          |



Note: 1. Margin = Result (Result = Reading + Factor )-Limit

2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.

3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.



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# (1GHz~25GHz) Restricted band and Spurious emission Requirements

| Peak value:        |                                 |                             | 002                   |                          | -LOW                      |                        |                       |                       |
|--------------------|---------------------------------|-----------------------------|-----------------------|--------------------------|---------------------------|------------------------|-----------------------|-----------------------|
| Frequency<br>(MHz) | Read<br>Leve <b>l</b><br>(dBuV) | Antenna<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Preamp<br>Factor<br>(dB) | Leve <b>l</b><br>(dBuV/m) | Limit Line<br>(dBuV/m) | Over<br>Limit<br>(dB) | po <b>l</b> arization |
| 4824.00            | 36.26                           | 31.79                       | 8.62                  | 32.10                    | 44.57                     | 74.00                  | -29.43                | Vertical              |
| 7236.00            | 31.67                           | 36.19                       | 11.68                 | 31.97                    | 47.57                     | 74.00                  | -26.43                | Vertica               |
| 9648.00            | 30.89                           | 38.07                       | 14.16                 | 31.56                    | 51.56                     | 74.00                  | -22.44                | Vertica               |
| 12060.00           | *                               |                             |                       |                          |                           | 74.00                  |                       | Vertica               |
| 14472.00           | *                               |                             |                       |                          |                           | 74.00                  |                       | Vertical              |
| 16884.00           | *                               |                             |                       |                          |                           | 74.00                  |                       | Vertical              |
| 4824.00            | 35.56                           | 31.79                       | 8.62                  | 32.10                    | 43.87                     | 74.00                  | -30.13                | Horizontal            |
| 7236.00            | 31.74                           | 36.19                       | 11.68                 | 31.97                    | 47.64                     | 74.00                  | -26.36                | Horizontal            |
| 9648.00            | 30.61                           | 38.07                       | 14.16                 | 31.56                    | 51.28                     | 74.00                  | -22.72                | Horizontal            |
| 12060.00           | *                               |                             |                       | 5 <u>7</u>               |                           | 74.00                  | 3                     | Horizonta             |
| 14472.00           | *                               |                             |                       | 5                        |                           | 74.00                  |                       | Horizontal            |
| 16884.00           | *                               |                             |                       |                          |                           | 74.00                  |                       | Horizontal            |

## 802.11b(Worst)-Low

#### Average value:

| Frequency<br>(MHz) | Read<br>Leve <b>l</b><br>(dBuV) | Antenna<br>Factor<br>(dB/m) | Cab <b>l</b> e<br>Loss<br>(dB) | Preamp<br>Factor<br>(dB) | Leve <b>l</b><br>(dBuV/m) | Limit Line<br>(dBuV/m) | Over<br>Limit<br>(dB) | polarization |
|--------------------|---------------------------------|-----------------------------|--------------------------------|--------------------------|---------------------------|------------------------|-----------------------|--------------|
| 4824.00            | 25.66                           | 31.79                       | 8.62                           | 32.10                    | 33.97                     | 54.00                  | -20.03                | Vertical     |
| 7236.00            | 20.63                           | 36.19                       | 11.68                          | 31.97                    | 36.53                     | 54.00                  | -17.47                | Vertica      |
| 9648.00            | 21.31                           | 38.07                       | 14.16                          | 31.56                    | 41.98                     | 54.00                  | <b>-</b> 12.02        | Vertical     |
| 12060.00           | *                               |                             |                                |                          |                           | 54.00                  |                       | Vertical     |
| 14472.00           | *                               |                             |                                |                          |                           | 54.00                  |                       | Vertical     |
| 16884.00           | *                               |                             |                                |                          |                           | 54.00                  |                       | Vertical     |
| 4824.00            | 25.31                           | 31.79                       | 8.62                           | 32.10                    | 33.62                     | 54.00                  | -20.38                | Horizontal   |
| 7236.00            | 20.39                           | 36.19                       | 11.68                          | 31.97                    | 36.29                     | 54.00                  | -17.71                | Horizontal   |
| 9648.00            | 20.42                           | 38.07                       | 14.16                          | 31.56                    | 41.09                     | 54.00                  | -12.91                | Horizonta    |
| 12060.00           | *                               |                             |                                |                          |                           | 54.00                  |                       | Horizonta    |
| 14472.00           | *                               |                             |                                |                          |                           | 54.00                  |                       | Horizonta    |
| 16884.00           | *                               |                             |                                |                          |                           | 54.00                  |                       | Horizontal   |

Remark:

1. Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor

2. "\*", means this data is the too weak instrument of signal is unable to test.



| Peak value:        |                         |                             |                       |                          |                   |                        |                       |                       |
|--------------------|-------------------------|-----------------------------|-----------------------|--------------------------|-------------------|------------------------|-----------------------|-----------------------|
| Frequency<br>(MHz) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Preamp<br>Factor<br>(dB) | Level<br>(dBuV/m) | Limit Line<br>(dBuV/m) | Over<br>Limit<br>(dB) | po <b>l</b> arizatior |
| 4874.00            | 40.49                   | 31.85                       | 8.67                  | 32.12                    | 48.89             | 74.00                  | -25.11                | Vertica               |
| 7311.00            | 35.17                   | 36.37                       | 11.72                 | 31.89                    | 51.37             | 74.00                  | -22.63                | Vertical              |
| 9748.00            | 34.80                   | 38.35                       | 14.25                 | 31.62                    | 55.78             | 74.00                  | -18.22                | Vertica               |
| 12185.00           | *                       |                             |                       |                          |                   | 74.00                  |                       | Vertica               |
| 14622.00           | *                       |                             |                       |                          |                   | 74.00                  |                       | Vertical              |
| 17059.00           | *                       |                             |                       |                          |                   | 74.00                  |                       | Vertical              |
| 4874.00            | 40.84                   | 31.85                       | 8.67                  | 32.12                    | 49.24             | 74.00                  | -24.76                | Horizonta             |
| 7311.00            | 34.07                   | 36.37                       | 11.72                 | 31.89                    | 50.27             | 74.00                  | -23.73                | Horizonta             |
| 9748.00            | 34.10                   | 38.35                       | 14.25                 | 31.62                    | 55.08             | 74.00                  | -18.92                | Horizonta             |
| 12185.00           | *                       |                             | 2                     |                          | 8                 | 74.00                  |                       | Horizonta             |
| 14622.00           | *                       |                             |                       |                          |                   | 74.00                  |                       | Horizonta             |
| 17059.00           | *                       |                             |                       |                          |                   | 74.00                  |                       | Horizonta             |

# 802.11b(Worst)-Middle

#### Average value:

| Frequency<br>(MHz) | Read<br>Leve <b>l</b><br>(dBuV) | Antenna<br>Factor<br>(dB/m) | Cab <b>l</b> e<br>Loss<br>(dB) | Preamp<br>Factor<br>(dB) | Leve <b>l</b><br>(dBuV/m) | Limit Line<br>(dBuV/m) | Over<br>Limit<br>(dB) | polarization |
|--------------------|---------------------------------|-----------------------------|--------------------------------|--------------------------|---------------------------|------------------------|-----------------------|--------------|
| 4874.00            | 31.31                           | 31.85                       | 8.67                           | 32.12                    | 39.71                     | 54.00                  | -14.29                | Vertica      |
| 7311.00            | 23.47                           | 36.37                       | 11.72                          | 31.89                    | 39.67                     | 54.00                  | -14.33                | Vertical     |
| 9748.00            | 24.05                           | 38.35                       | 14.25                          | 31.62                    | 45.03                     | 54.00                  | -8.97                 | Vertical     |
| 12185.00           | *                               |                             |                                |                          |                           | 54.00                  |                       | Vertical     |
| 14622.00           | *                               |                             |                                |                          |                           | 54.00                  |                       | Vertica      |
| 17059.00           | *                               |                             |                                |                          |                           | 54.00                  |                       | Vertical     |
| 4874.00            | 30.94                           | 31.85                       | 8.67                           | 32.12                    | 39.34                     | 54.00                  | -14.66                | Horizontal   |
| 7311.00            | 23.15                           | 36.37                       | 11.72                          | 31.89                    | 39.35                     | 54.00                  | -14.65                | Horizonta    |
| 9748.00            | 23.81                           | 38.35                       | 14.25                          | 31.62                    | 44.79                     | 54.00                  | -9.21                 | Horizonta    |
| 12185.00           | *                               |                             |                                |                          |                           | 54.00                  | 8                     | Horizonta    |
| 14622.00           | *                               |                             |                                |                          |                           | 54.00                  | in in                 | Horizonta    |
| 17059.00           | *                               |                             |                                |                          |                           | 54.00                  |                       | Horizonta    |

Remark:

1. Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor

2. "\*", means this data is the too weak instrument of signal is unable to test.



| Frequency<br>(MHz) | Read<br>Leve <b>l</b><br>(dBuV) | Antenna<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Preamp<br>Factor<br>(dB) | Leve <b>l</b><br>(dBuV/m) | Limit Line<br>(dBuV/m) | Over<br>Limit<br>(dB) | polarization |
|--------------------|---------------------------------|-----------------------------|-----------------------|--------------------------|---------------------------|------------------------|-----------------------|--------------|
| 4924.00            | 39.14                           | 31.90                       | 8.70                  | 32.15                    | 47.59                     | 74.00                  | -26.41                | Vertica      |
| 7386.00            | 31.33                           | 36.49                       | 11.76                 | 31.83                    | 47.75                     | 74.00                  | -26.25                | Vertica      |
| 9848.00            | 34.43                           | 38.62                       | 14.31                 | 31.77                    | 55.59                     | 74.00                  | -18.41                | Vertical     |
| 12310.00           | *                               |                             |                       |                          |                           | 74.00                  |                       | Vertical     |
| 14772.00           | *                               |                             |                       |                          |                           | 74.00                  |                       | Vertica      |
| 17234.00           | *                               |                             |                       |                          |                           | 74.00                  |                       | Vertica      |
| 4924.00            | 39.34                           | 31.90                       | 8.70                  | 32.15                    | 47.79                     | 74.00                  | -26.21                | Horizontal   |
| 7386.00            | 30.69                           | 36.49                       | 11.76                 | 31.83                    | 47.11                     | 74.00                  | -26.89                | Horizontal   |
| 9848.00            | 30.80                           | 38.62                       | 14.31                 | 31.77                    | 51.96                     | 74.00                  | -22.04                | Horizontal   |
| 12310.00           | *                               |                             |                       |                          |                           | 74.00                  |                       | Horizonta    |
| 14772.00           | *                               |                             |                       |                          |                           | 74.00                  | ee                    | Horizonta    |
| 17234.00           | *                               |                             |                       |                          |                           | 74.00                  |                       | Horizonta    |

## 802.11b(Worst)-High

#### Average value:

| Frequency<br>(MHz) | Read<br>Leve <b>l</b><br>(dBuV) | Antenna<br>Factor<br>(dB/m) | Cab <b>l</b> e<br>Loss<br>(dB) | Preamp<br>Factor<br>(dB) | Leve <b>l</b><br>(dBuV/m) | Limit Line<br>(dBuV/m) | Over<br>Limit<br>(dB) | polarization |
|--------------------|---------------------------------|-----------------------------|--------------------------------|--------------------------|---------------------------|------------------------|-----------------------|--------------|
| 4924.00            | 30.50                           | 31.90                       | 8.70                           | 32.15                    | 38.95                     | 54.00                  | -15.05                | Vertica      |
| 7386.00            | 21.38                           | 36.49                       | 11.76                          | 31.83                    | 37.80                     | 54.00                  | -16.20                | Vertica      |
| 9848.00            | 23.04                           | 38.62                       | 14.31                          | 31.77                    | 44.20                     | 54.00                  | -9.80                 | Vertica      |
| 12310.00           | *                               |                             |                                | 97                       |                           | 54.00                  | 8                     | Vertica      |
| 14772.00           | *                               |                             |                                |                          |                           | 54.00                  |                       | Vertica      |
| 17234.00           | *                               |                             |                                |                          |                           | 54.00                  |                       | Vertica      |
| 4924.00            | 30.00                           | 31.90                       | 8.70                           | 32.15                    | 38.45                     | 54.00                  | -15.55                | Horizonta    |
| 7386.00            | 20.18                           | 36.49                       | 11.76                          | 31.83                    | 36.60                     | 54.00                  | -17.40                | Horizontal   |
| 9848.00            | 20.15                           | 38.62                       | 14.31                          | 31.77                    | 41.31                     | 54.00                  | -12.69                | Horizonta    |
| 12310.00           | *                               |                             |                                |                          |                           | 54.00                  |                       | Horizonta    |
| 14772.00           | *                               | 1                           |                                | 8                        |                           | 54.00                  | 8                     | Horizonta    |
| 17234.00           | *                               |                             | 40                             | Si Si                    |                           | 54.00                  | 8                     | Horizonta    |

#### Remark:

1. Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor

2. "\*", means this data is the too weak instrument of signal is unable to test.

1. Notes: emissions are attenuated 20dB below the limits, so it does not record. Remark:

1.Factor = Antenna Factor + Cable Loss – Pre-amplifier.

2.Scan with 802.11b, 802.11g, 802.11n (HT-20), the worst case

is 802.11b.Emission Level = Reading + FactorMargin = Limit - Emission Leve

3. The frequency emission of peak points that did not show above the forms are at least 20dB below the limit, the frequency emission is mainly from the environment noise



# 802.11 b low CH

# Peak value:

| Frequency<br>(MHz) | Read<br>Leve <b>l</b><br>(dBuV) | Antenna<br>Factor<br>(dB/m) | Cab <b>l</b> e<br>Loss<br>(dB) | Preamp<br>Factor<br>(dB) | Leve <b>l</b><br>(dBuV/m) | Limit Line<br>(dBuV/m) | Over<br>Limit<br>(dB) | Polarization |
|--------------------|---------------------------------|-----------------------------|--------------------------------|--------------------------|---------------------------|------------------------|-----------------------|--------------|
| 2390.00            | 48.89                           | 27.59                       | 5.38                           | 34.01                    | 47.85                     | 74.00                  | -26.15                | Horizontal   |
| 2400.00            | 54.73                           | 27.58                       | 5.39                           | 34.01                    | 53.69                     | 74.00                  | -20.31                | Horizontal   |
| 2390.00            | 47.76                           | 27.59                       | 5.38                           | 34.01                    | 46.72                     | 74.00                  | -27.28                | Vertical     |
| 2400.00            | 51.59                           | 27.58                       | 5.39                           | 34.01                    | 50.55                     | 74.00                  | -23.45                | Vertical     |

#### Average value:

| Frequency<br>(MHz) | Read<br>Leve <b>l</b><br>(dBuV) | Antenna<br>Factor<br>(dB/m) | Cab <b>l</b> e<br>Loss<br>(dB) | Preamp<br>Factor<br>(dB) | Leve <b>l</b><br>(dBuV/m) | Limit Line<br>(dBuV/m) | Over<br>Limit<br>(dB) | Polarization |
|--------------------|---------------------------------|-----------------------------|--------------------------------|--------------------------|---------------------------|------------------------|-----------------------|--------------|
| 2390.00            | 37.90                           | 27.59                       | 5.38                           | 34.01                    | 36.86                     | 54.00                  | -17.14                | Horizontal   |
| 2400.00            | 43.82                           | 27.58                       | 5.39                           | 34.01                    | 42.78                     | 54.00                  | -11.22                | Horizontal   |
| 2390.00            | 36.12                           | 27.59                       | 5.38                           | 34.01                    | 35.08                     | 54.00                  | -18.92                | Vertical     |
| 2400.00            | 40.68                           | 27.58                       | 5.39                           | 34.01                    | 39.64                     | 54.00                  | -14.36                | Vertical     |

# 802.11 b High CH

# Peak value:

| Frequency<br>(MHz) | Read<br>Leve <b>l</b><br>(dBuV) | Antenna<br>Factor<br>(dB/m) | Cab <b>l</b> e<br>Loss<br>(dB) | Preamp<br>Factor<br>(dB) | Leve <b>l</b><br>(dBuV/m) | Limit Line<br>(dBuV/m) | Over<br>Limit<br>(dB) | Polarization |
|--------------------|---------------------------------|-----------------------------|--------------------------------|--------------------------|---------------------------|------------------------|-----------------------|--------------|
| 2483.50            | 48.23                           | 27.53                       | 5.47                           | 33.92                    | 47.31                     | 74.00                  | -26.69                | Horizontal   |
| 2500.00            | 45.87                           | 27.55                       | 5.49                           | 29.93                    | 48.98                     | 74.00                  | -25.02                | Horizontal   |
| 2483.50            | 47.68                           | 27.53                       | 5.47                           | 33.92                    | 46.76                     | 74.00                  | <b>-</b> 27.24        | Vertical     |
| 2500.00            | 44.05                           | 27.55                       | 5.49                           | 29.93                    | 47.16                     | 74.00                  | -26.84                | Vertical     |

#### Average value:

| Frequency<br>(MHz) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Preamp<br>Factor<br>(dB) | Leve <b>l</b><br>(dBuV/m) | Limit Line<br>(dBuV/m) | Over<br>Limit<br>(dB) | Polarization |
|--------------------|-------------------------|-----------------------------|-----------------------|--------------------------|---------------------------|------------------------|-----------------------|--------------|
| 2483.50            | 37.14                   | 27.53                       | 5.47                  | 33.92                    | 36.22                     | 54.00                  | <b>-</b> 17.78        | Horizontal   |
| 2500.00            | 34.14                   | 27.55                       | 5.49                  | 29.93                    | 37.25                     | 54.00                  | -16.75                | Horizontal   |
| 2483.50            | 35.29                   | 27.53                       | 5.47                  | 33.92                    | 34.37                     | 54.00                  | -19.63                | Vertical     |
| 2500.00            | 32.40                   | 27.55                       | 5.49                  | 29.93                    | 35.51                     | 54.00                  | -18.49                | Vertical     |



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# 802.11 g Low CH

| Peak value:        |                         |                             |                       |                          |                           |                        |                       |              |
|--------------------|-------------------------|-----------------------------|-----------------------|--------------------------|---------------------------|------------------------|-----------------------|--------------|
| Frequency<br>(MHz) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>(dB/m) | Cable<br>Loss<br>(dB) | Preamp<br>Factor<br>(dB) | Leve <b>l</b><br>(dBuV/m) | Limit Line<br>(dBuV/m) | Over<br>Limit<br>(dB) | Polarization |
| 2390.00            | 61.94                   | 27.59                       | 5.38                  | 34.01                    | 60.90                     | 74.00                  | -13.10                | Horizontal   |
| 2400.00            | 70.56                   | 27.58                       | 5.39                  | 34.01                    | 69.52                     | 74.00                  | -4.48                 | Horizontal   |
| 2390.00            | 58.19                   | 27.59                       | 5.38                  | 34.01                    | 57.15                     | 74.00                  | -16.85                | Vertical     |
| 2400.00            | 67.21                   | 27.58                       | 5.39                  | 34.01                    | 66.17                     | 74.00                  | -7.83                 | Vertical     |

#### Average value:

| Frequency<br>(MHz) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>(dB/m) | Cab <b>l</b> e<br>Loss<br>(dB) | Preamp<br>Factor<br>(dB) | Leve <b>l</b><br>(dBuV/m) | Limit Line<br>(dBuV/m) | Over<br>Limit<br>(dB) | Polarization |
|--------------------|-------------------------|-----------------------------|--------------------------------|--------------------------|---------------------------|------------------------|-----------------------|--------------|
| 2390.00            | 44.24                   | 27.59                       | 5.38                           | 34.01                    | 43.20                     | 54.00                  | -10.80                | Horizontal   |
| 2400.00            | 50.90                   | 27.58                       | 5.39                           | 34.01                    | 49.86                     | 54.00                  | -4.14                 | Horizontal   |
| 2390.00            | 41.78                   | 27.59                       | 5.38                           | 34.01                    | 40.74                     | 54.00                  | -13.26                | Vertical     |
| 2400.00            | 47.82                   | 27.58                       | 5.39                           | 34.01                    | 46.78                     | 54.00                  | -7.22                 | Vertical     |

802.11 g High CH

# Peak value:

| Frequency<br>(MHz) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>(dB/m) | Cab <b>l</b> e<br>Loss<br>(dB) | Preamp<br>Factor<br>(dB) | Leve <b>l</b><br>(dBuV/m) | Limit Line<br>(dBuV/m) | Over<br>Limit<br>(dB) | Polarization |
|--------------------|-------------------------|-----------------------------|--------------------------------|--------------------------|---------------------------|------------------------|-----------------------|--------------|
| 2483.50            | 53.82                   | 27.53                       | 5.47                           | 33.92                    | 52.90                     | 74.00                  | -21.10                | Horizontal   |
| 2500.00            | 47.07                   | 27.55                       | 5.49                           | 29.93                    | 50.18                     | 74.00                  | -23.82                | Horizontal   |
| 2483.50            | 48.91                   | 27.53                       | 5.47                           | 33.92                    | 47.99                     | 74.00                  | -26.01                | Vertical     |
| 2500.00            | 45.36                   | 27.55                       | 5.49                           | 29.93                    | 48.47                     | 74.00                  | -25.53                | Vertical     |

Average value:

| Frequency<br>(MHz) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>(dB/m) | Cab <b>l</b> e<br>Loss<br>(dB) | Preamp<br>Factor<br>(dB) | Leve <b>l</b><br>(dBuV/m) | Limit Line<br>(dBuV/m) | Over<br>Limit<br>(dB) | Polarization |
|--------------------|-------------------------|-----------------------------|--------------------------------|--------------------------|---------------------------|------------------------|-----------------------|--------------|
| 2483.50            | 36.70                   | 27.53                       | 5.47                           | 33.92                    | 35.78                     | 54.00                  | -18.22                | Horizontal   |
| 2500.00            | 34.80                   | 27.55                       | 5.49                           | 29.93                    | 37.91                     | 54.00                  | -16.09                | Horizontal   |
| 2483.50            | 35.25                   | 27.53                       | 5.47                           | 33.92                    | 34.33                     | 54.00                  | -19.67                | Vertical     |
| 2500.00            | 33.11                   | 27.55                       | 5.49                           | 29.93                    | 36.22                     | 54.00                  | -17.78                | Vertical     |



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# 802.11 N 20 Low CH

Peak value:

| Frequency<br>(MHz) | Read<br>Leve <b>l</b><br>(dBuV) | Antenna<br>Factor<br>(dB/m) | Cab <b>l</b> e<br>Loss<br>(dB) | Preamp<br>Factor<br>(dB) | Leve <b>l</b><br>(dBuV/m) | Limit Line<br>(dBuV/m) | Over<br>Limit<br>(dB) | Polarization |
|--------------------|---------------------------------|-----------------------------|--------------------------------|--------------------------|---------------------------|------------------------|-----------------------|--------------|
| 2390.00            | 61.98                           | 27.59                       | 5.38                           | 34.01                    | 60.94                     | 74.00                  | -13.06                | Horizontal   |
| 2400.00            | 72.50                           | 27.58                       | 5.39                           | 34.01                    | 71.46                     | 74.00                  | -2.54                 | Horizontal   |
| 2390.00            | 57.89                           | 27.59                       | 5.38                           | 34.01                    | 56.85                     | 74.00                  | -17.15                | Vertical     |
| 2400.00            | 68.39                           | 27.58                       | 5.39                           | 34.01                    | 67.35                     | 74.00                  | -6.65                 | Vertical     |

#### Average value:

| Frequency<br>(MHz) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>(dB/m) | Cab <b>l</b> e<br>Loss<br>(dB) | Preamp<br>Factor<br>(dB) | Leve <b>l</b><br>(dBuV/m) | Limit Line<br>(dBuV/m) | Over<br>Limit<br>(dB) | Polarization |
|--------------------|-------------------------|-----------------------------|--------------------------------|--------------------------|---------------------------|------------------------|-----------------------|--------------|
| 2390.00            | 46.17                   | 27.59                       | 5.38                           | 34.01                    | 45.13                     | 54.00                  | -8.87                 | Horizontal   |
| 2400.00            | 51.36                   | 27.58                       | 5.39                           | 34.01                    | 50.32                     | 54.00                  | -3.68                 | Horizontal   |
| 2390.00            | 42.53                   | 27.59                       | 5.38                           | 34.01                    | 41.49                     | 54.00                  | <b>-</b> 12.51        | Vertical     |
| 2400.00            | 47.69                   | 27.58                       | 5.39                           | 34.01                    | 46.65                     | 54.00                  | -7.35                 | Vertical     |

# 802.11 N 20 High CH Peak value:

| Frequency<br>(MHz) | Read<br>Level<br>(dBuV) | Antenna<br>Factor<br>(dB/m) | Cab <b>l</b> e<br>Loss<br>(dB) | Preamp<br>Factor<br>(dB) | Leve <b>l</b><br>(dBuV/m) | Limit Line<br>(dBuV/m) | Over<br>Limit<br>(dB) | Polarization |
|--------------------|-------------------------|-----------------------------|--------------------------------|--------------------------|---------------------------|------------------------|-----------------------|--------------|
| 2483.50            | 52.73                   | 27.53                       | 5.47                           | 33.92                    | 51.81                     | 74.00                  | -22.19                | Horizontal   |
| 2500.00            | 47.15                   | 27.55                       | 5.49                           | 29.93                    | 50.26                     | 74.00                  | -23.74                | Horizontal   |
| 2483.50            | 48.88                   | 27.53                       | 5.47                           | 33.92                    | 47.96                     | 74.00                  | -26.04                | Vertical     |
| 2500.00            | 45.26                   | 27.55                       | 5.49                           | 29.93                    | 48.37                     | 74.00                  | -25.63                | Vertical     |

Average value:

| Frequency<br>(MHz) | Read<br>Leve <b>l</b><br>(dBuV) | Antenna<br>Factor<br>(dB/m) | Cab <b>l</b> e<br>Loss<br>(dB) | Preamp<br>Factor<br>(dB) | Leve <b>l</b><br>(dBuV/m) | Limit Line<br>(dBuV/m) | Over<br>Limit<br>(dB) | Polarization |
|--------------------|---------------------------------|-----------------------------|--------------------------------|--------------------------|---------------------------|------------------------|-----------------------|--------------|
| 2483.50            | 36.68                           | 27.53                       | 5.47                           | 33.92                    | 35.76                     | 54.00                  | -18.24                | Horizontal   |
| 2500.00            | 34.84                           | 27.55                       | 5.49                           | 29.93                    | 37.95                     | 54.00                  | -16.05                | Horizontal   |
| 2483.50            | 35.51                           | 27.53                       | 5.47                           | 33.92                    | 34.59                     | 54.00                  | -19.41                | Vertical     |
| 2500.00            | 33.13                           | 27.55                       | 5.49                           | 29.93                    | 36.24                     | 54.00                  | -17.76                | Vertical     |





# **8 CONDUCTED EMISSION TEST**

# 8.1.1 POWER LINE CONDUCTED EMISSION LIMITS

Operating frequency band. In case the emission fall within the restricted band specified on Part 207(a) limit in the table below has to be followed.

|                 | Conducted Emissionlimit (dBuV) |           |  |  |
|-----------------|--------------------------------|-----------|--|--|
| FREQUENCY (MHz) | Quasi-peak                     | Average   |  |  |
| 0.15 -0.5       | 66 - 56 *                      | 56 - 46 * |  |  |
| 0.50 -5.0       | 56.00                          | 46.00     |  |  |
| 5.0 -30.0       | 60.00                          | 50.00     |  |  |

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " \* " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

| Receiver Parameters | Setting  |  |  |  |
|---------------------|----------|--|--|--|
| Attenuation         | 10 dB    |  |  |  |
| Start Frequency     | 0.15 MHz |  |  |  |
| Stop Frequency      | 30 MHz   |  |  |  |
| IF Bandwidth        | 9 kHz    |  |  |  |



#### 8.1.2 TEST PROCEDURE

- a. The EUT was 0.8 meters from the horizontal ground plane and 0.4 meters from the vertical ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

# Vertical Reference Ground Plane EUT 40cm EUT 80cm N Horizontal Reference Ground Plane

# 8.1.3 TEST SETUP

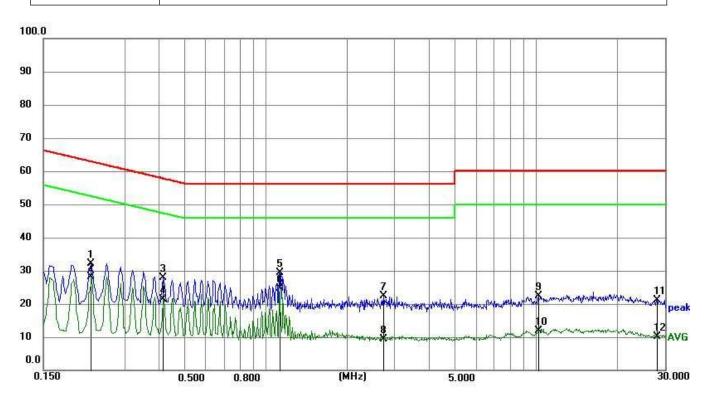
Note: 1.Support units were connected to second LISN.

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes



# 8.1.4 TEST RESULT

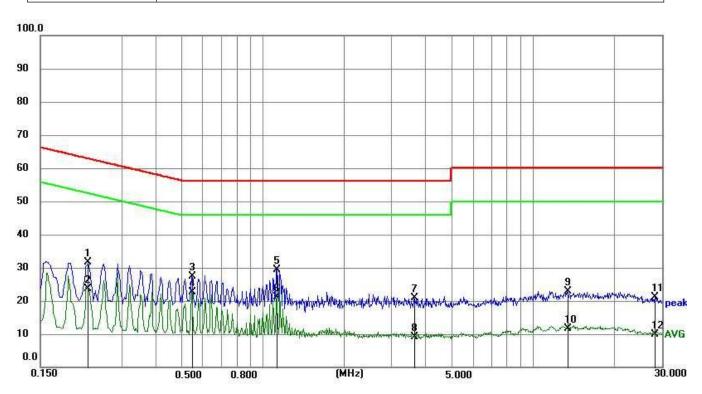
| Temperature:  | 22.1 °C          | Relative Humidity: | 56% |
|---------------|------------------|--------------------|-----|
| Test Voltage: | DC 5V by adapter | Phase:             | L   |
| Test Mode:    | 802.11b(worst)   |                    |     |



| No. | Frequency | Reading | Correct      | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|--------------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 0.2265    | 21.98   | 10.06        | 32.04    | 62.58    | 30.54  | QP     |
| 2   | 0.2265    | 18. 15  | 10.06        | 28.21    | 52.58    | 24.37  | AVG    |
| 3   | 0.4155    | 17.88   | 10.02        | 27.90    | 57.54    | 29.64  | QP     |
| 4   | 0.4155    | 11.38   | 10.02        | 21.40    | 47.54    | 26. 14 | AVG    |
| 5   | 1. 1220   | 19.43   | 10.00        | 29.43    | 56.00    | 26.57  | QP     |
| 6   | 1. 1220   | 14.54   | 10.00        | 24.54    | 46.00    | 21.46  | AVG    |
| 7   | 2.7239    | 12.48   | 9.95         | 22.43    | 56.00    | 33.57  | QP     |
| 8   | 2.7239    | -0.67   | 9.95         | 9.28     | 46.00    | 36.72  | AVG    |
| 9   | 10.2075   | 12.63   | 9.80         | 22.43    | 60.00    | 37.57  | QP     |
| 10  | 10.2075   | 2. 18   | 9.80         | 11.98    | 50.00    | 38.02  | AVG    |
| 11  | 27.9060   | 11.32   | 9.90         | 21.22    | 60.00    | 38.78  | QP     |
| 12  | 27.9060   | 0. 14   | 9.90         | 10.04    | 50.00    | 39.96  | AVG    |



| Temperature:  | 22.1 °C          | Relative Humidity: | 56% |
|---------------|------------------|--------------------|-----|
| Test Voltage: | DC 5V by adapter | Phase:             | Ν   |
| Test Mode:    | 802.11b(worst)   |                    |     |



| No. | Frequency | Reading | Correct      | Result   | Limit    | Margin | Remark |
|-----|-----------|---------|--------------|----------|----------|--------|--------|
|     | (MHz)     | (dBuV)  | Factor(dB/m) | (dBuV/m) | (dBuV/m) | (dB)   |        |
| 1   | 0.2265    | 21.47   | 10.05        | 31.52    | 62.58    | 31.06  | QP     |
| 2   | 0.2265    | 13.46   | 10.05        | 23.51    | 52.58    | 29.07  | AVG    |
| 3   | 0.5460    | 17.34   | 10.00        | 27.34    | 56.00    | 28.66  | QP     |
| 4   | 0.5460    | 12.65   | 10.00        | 22.65    | 46.00    | 23.35  | AVG    |
| 5   | 1. 1220   | 19.39   | 9.99         | 29.38    | 56.00    | 26.62  | QP     |
| 6   | 1. 1220   | 11.08   | 9.99         | 21.07    | 46.00    | 24.93  | AVG    |
| 7   | 3.6285    | 10.93   | 9.92         | 20.85    | 56.00    | 35. 15 | QP     |
| 8   | 3.6285    | -0.68   | 9.92         | 9.24     | 46.00    | 36.76  | AVG    |
| 9   | 13.3935   | 12.94   | 9.82         | 22.76    | 60.00    | 37.24  | QP     |
| 10  | 13.3935   | 1.69    | 9.82         | 11.51    | 50.00    | 38.49  | AVG    |
| 11  | 28. 1985  | 11. 16  | 9.98         | 21. 14   | 60.00    | 38.86  | QP     |
| 12  | 28. 1985  | 0.02    | 9.98         | 10.00    | 50.00    | 40.00  | AVG    |



### 9. ANTENNA REQUIREMENT

#### 9.1 STANDARD REQUIREMENT

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

#### 9.2 RESULT

The antennas used for this product are Internal antenna and other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is 1.50dBi.

\*\*\*\*\*\*END OF THE REPORT\*\*\*\*\*