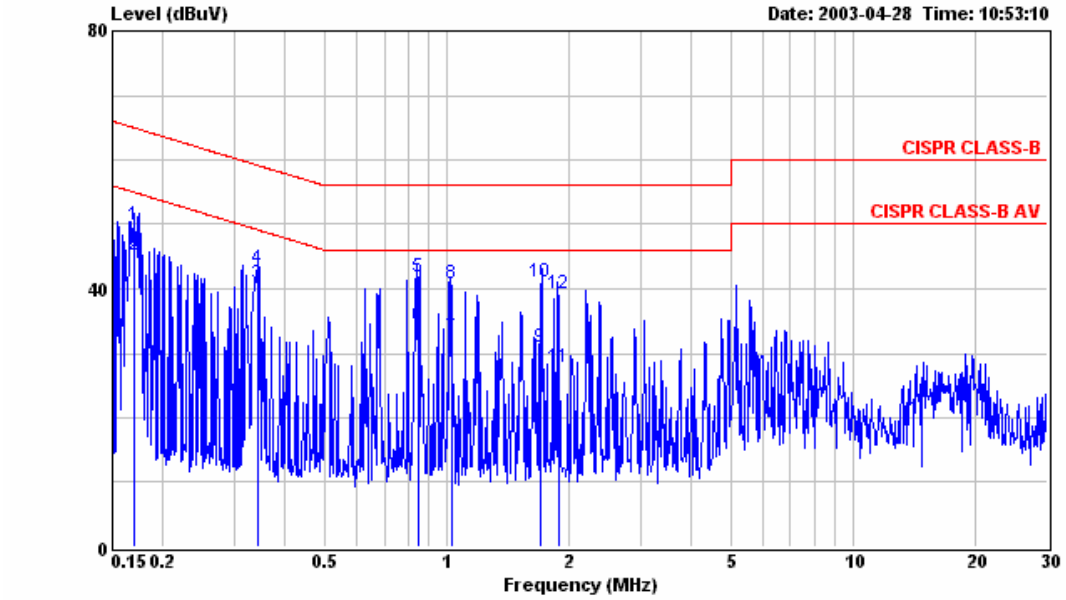
5.8.3. Test Result of Conducted Emission:

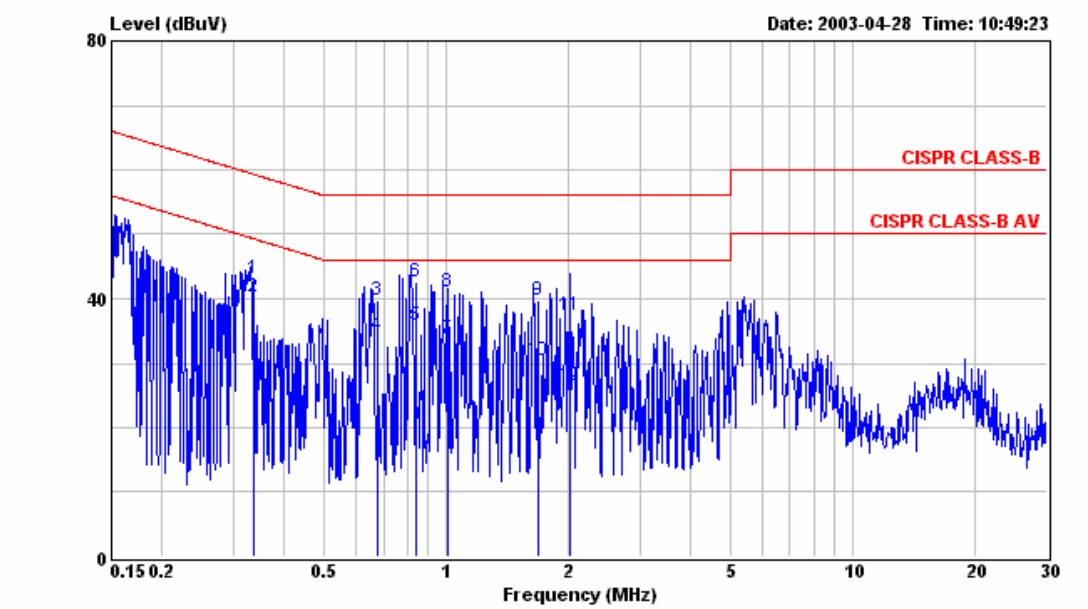
- Test Mode: Mode 7
- Frequency Range of Test: from 150KHz to 30 MHz
- 6dB Bandwidth: 9KHz
- Temperature: 27°C
- Relative Humidity: 63 %

**The test was passed at the minimum margin that marked by a frame in the following data**




Site : C001-HY
Condition : CISPR CLASS-B LISN2001/008 LINE
EUT : PDA
Power : 110V/60Hz
Memo : TX CH00 2402MHz
: Cradle
: 342404

| | Freq | Level | Over Limit | Limit Line | Read Level | Probe Factor | Cable Loss | Remark |
|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dBuV | dBuV | dB | dB | dB | |
| 1 | 0.170 | 49.85 | -15.10 | 64.95 | 49.56 | 0.29 | 0.10 | 0.19 | QP |
| 2 | 0.170 | 45.10 | -9.85 | 54.95 | 44.81 | 0.29 | 0.10 | 0.19 | Average |
| 3 | 0.341 | 40.83 | -8.35 | 49.18 | 40.55 | 0.28 | 0.10 | 0.18 | Average |
| 4 | 0.341 | 43.08 | -16.10 | 59.18 | 42.80 | 0.28 | 0.10 | 0.18 | QP |
| 5 | 0.852 | 41.72 | -14.28 | 56.00 | 41.44 | 0.28 | 0.10 | 0.18 | QP |
| 6 | 0.852 | 34.40 | -11.60 | 46.00 | 34.12 | 0.28 | 0.10 | 0.18 | Average |
| 7 | 1.026 | 32.55 | -13.45 | 46.00 | 32.28 | 0.27 | 0.10 | 0.17 | Average |
| 8 | 1.026 | 40.84 | -15.16 | 56.00 | 40.57 | 0.27 | 0.10 | 0.17 | QP |
| 9 | 1.700 | 30.92 | -15.08 | 46.00 | 30.74 | 0.18 | 0.10 | 0.08 | Average |
| 10 | 1.700 | 41.11 | -14.89 | 56.00 | 40.93 | 0.18 | 0.10 | 0.08 | QP |
| 11 | 1.877 | 27.80 | -18.20 | 46.00 | 27.64 | 0.16 | 0.10 | 0.06 | Average |
| 12 | 1.877 | 39.34 | -16.66 | 56.00 | 39.18 | 0.16 | 0.10 | 0.06 | QP |



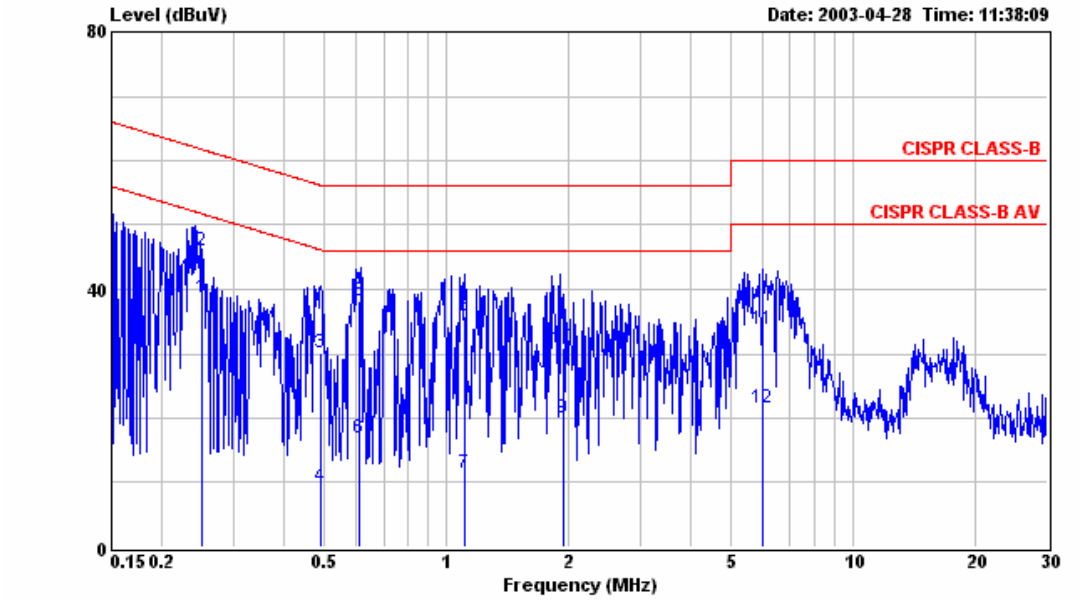

Site : C001-HY
Condition : CISPR CLASS-B LISN2001/008 NEUTRAL
EUT : PDA
Power : 110V/60Hz
Memo : TX CH00 2402MHz
: Cradle
: 342404

| | Freq | Level | Over Limit | Limit Line | Read Level | Factor | Probe Factor | Cable Loss | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dBuV | dBuV | dB | dB | dB | |
| 1 | 0.335 | 43.21 | -16.11 | 59.32 | 42.94 | 0.27 | 0.10 | 0.17 | QP |
| 2 | 0.335 | 40.30 | -9.02 | 49.32 | 40.03 | 0.27 | 0.10 | 0.17 | Average |
| 3 | 0.675 | 39.83 | -16.17 | 56.00 | 39.55 | 0.28 | 0.10 | 0.18 | QP |
| 4 | 0.675 | 34.39 | -11.61 | 46.00 | 34.11 | 0.28 | 0.10 | 0.18 | Average |
| 5 | 0.845 | 35.92 | -10.08 | 46.00 | 35.64 | 0.28 | 0.10 | 0.18 | Average |
| 6 | 0.845 | 42.64 | -13.36 | 56.00 | 42.36 | 0.28 | 0.10 | 0.18 | QP |
| 7 | 1.009 | 33.67 | -12.33 | 46.00 | 33.39 | 0.28 | 0.10 | 0.18 | Average |
| 8 | 1.009 | 41.05 | -14.95 | 56.00 | 40.77 | 0.28 | 0.10 | 0.18 | QP |
| 9 | 1.682 | 39.70 | -16.30 | 56.00 | 39.52 | 0.18 | 0.10 | 0.08 | QP |
| 10 | 1.682 | 30.38 | -15.62 | 46.00 | 30.20 | 0.18 | 0.10 | 0.08 | Average |
| 11 | 2.006 | 37.31 | -18.69 | 56.00 | 37.16 | 0.15 | 0.10 | 0.05 | QP |
| 12 | 2.006 | 26.42 | -19.58 | 46.00 | 26.27 | 0.15 | 0.10 | 0.05 | Average |

Test Engineer : Jay
Jay Zhong

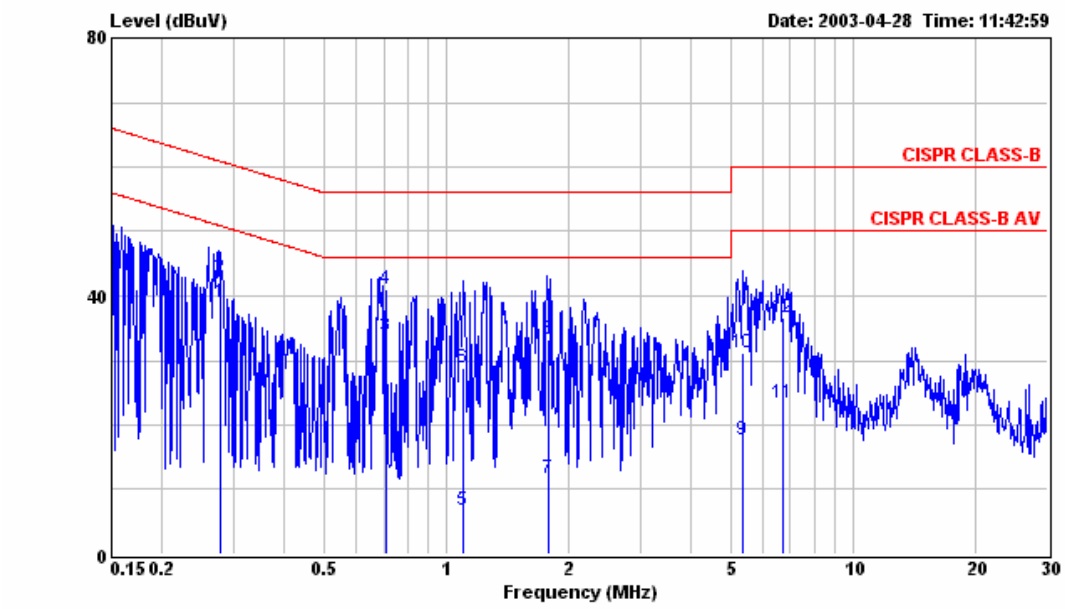
- Test Mode: Mode 8
- Frequency Range of Test: from 150KHz to 30 MHz
- 6dB Bandwidth: 9KHz
- Temperature: 27°C
- Relative Humidity: 63 %

**The test was passed at the minimum margin that marked by a frame in the following data**




Site : C001-HY
Condition : CISPR CLASS-B LISN2001/008 NEUTRAL
EUT : PDA
Power : 110V/60Hz
Memo : TX CH39 2441MHz
: Cradle
: 342404

| | Freq | Level | Over Limit | Limit Line | Read Level | Probe Factor | Cable Loss | Remark |
|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dBuV | dBuV | dB | dB | dB | |
| 1 | 0.250 | 38.67 | -13.08 | 51.75 | 38.40 | 0.27 | 0.10 | 0.17 | Average |
| 2 | 0.250 | 46.02 | -15.73 | 61.75 | 45.75 | 0.27 | 0.10 | 0.17 | QP |
| 3 | 0.491 | 30.16 | -25.99 | 56.15 | 29.88 | 0.28 | 0.10 | 0.18 | QP |
| 4 | 0.491 | 9.38 | -36.77 | 46.15 | 9.10 | 0.28 | 0.10 | 0.18 | Average |
| 5 | 0.609 | 38.08 | -17.92 | 56.00 | 37.80 | 0.28 | 0.10 | 0.18 | QP |
| 6 | 0.609 | 16.81 | -29.19 | 46.00 | 16.53 | 0.28 | 0.10 | 0.18 | Average |
| 7 | 1.110 | 11.33 | -34.67 | 46.00 | 11.07 | 0.26 | 0.10 | 0.16 | Average |
| 8 | 1.110 | 35.82 | -20.18 | 56.00 | 35.56 | 0.26 | 0.10 | 0.16 | QP |
| 9 | 1.936 | 19.91 | -26.09 | 46.00 | 19.75 | 0.16 | 0.10 | 0.06 | Average |
| 10 | 1.936 | 30.90 | -25.10 | 56.00 | 30.74 | 0.16 | 0.10 | 0.06 | QP |
| 11 | 5.990 | 33.65 | -26.35 | 60.00 | 33.32 | 0.33 | 0.20 | 0.13 | QP |
| 12 | 5.990 | 21.46 | -28.54 | 50.00 | 21.13 | 0.33 | 0.20 | 0.13 | Average |



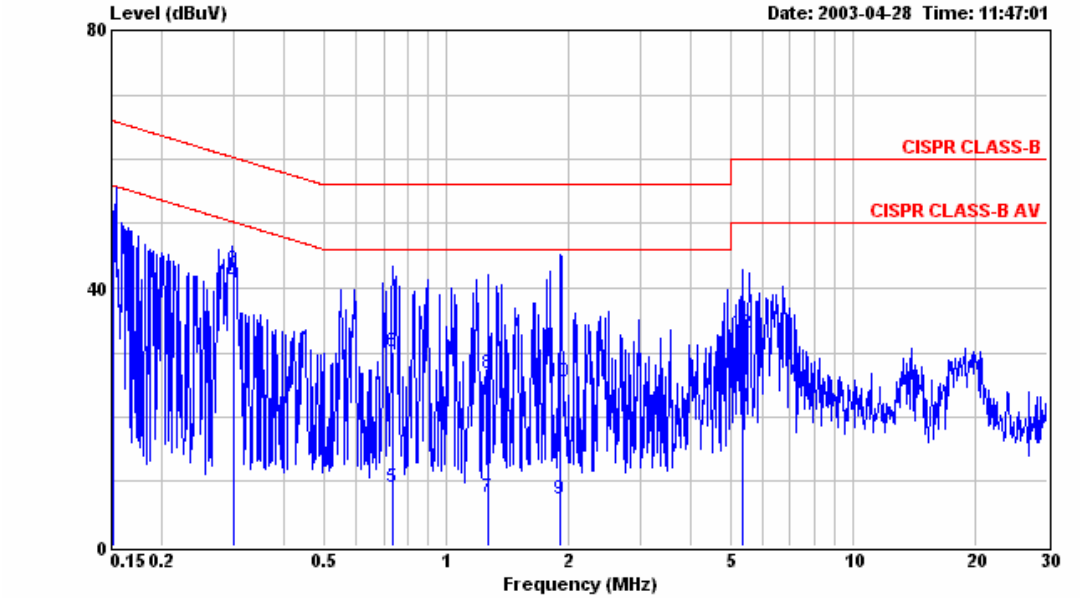

Site : C001-HY
Condition : CISPR CLASS-B LISN2001/008 LINE
EUT : PDA
Power : 110V/60Hz
Memo : TX CH39 2441MHz
: Cradle
: 342404

| | Freq | Level | Over Limit | Limit Line | Read Level | Probe Factor | Cable Loss | Remark |
|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dBuV | dBuV | dB | dB | dB | |
| 1 | 0.279 | 38.95 | -11.91 | 50.86 | 38.68 | 0.27 | 0.10 | 0.17 | Average |
| 2 | 0.279 | 42.92 | -17.94 | 60.86 | 42.65 | 0.27 | 0.10 | 0.17 | QP |
| 3 | 0.711 | 33.89 | -12.11 | 46.00 | 33.61 | 0.28 | 0.10 | 0.18 | Average |
| 4 | 0.711 | 40.98 | -15.02 | 56.00 | 40.70 | 0.28 | 0.10 | 0.18 | QP |
| 5 | 1.100 | 6.82 | -39.18 | 46.00 | 6.56 | 0.26 | 0.10 | 0.16 | Average |
| 6 | 1.100 | 28.78 | -27.22 | 56.00 | 28.52 | 0.26 | 0.10 | 0.16 | QP |
| 7 | 1.778 | 11.56 | -34.44 | 46.00 | 11.39 | 0.17 | 0.10 | 0.07 | Average |
| 8 | 1.778 | 33.13 | -22.87 | 56.00 | 32.96 | 0.17 | 0.10 | 0.07 | QP |
| 9 | 5.330 | 17.57 | -32.43 | 50.00 | 17.26 | 0.31 | 0.20 | 0.11 | Average |
| 10 | 5.330 | 31.08 | -28.92 | 60.00 | 30.77 | 0.31 | 0.20 | 0.11 | QP |
| 11 | 6.700 | 23.31 | -26.69 | 50.00 | 22.96 | 0.35 | 0.20 | 0.15 | Average |
| 12 | 6.700 | 36.52 | -23.48 | 60.00 | 36.17 | 0.35 | 0.20 | 0.15 | QP |

Test Engineer : Jay
Jay Zhong

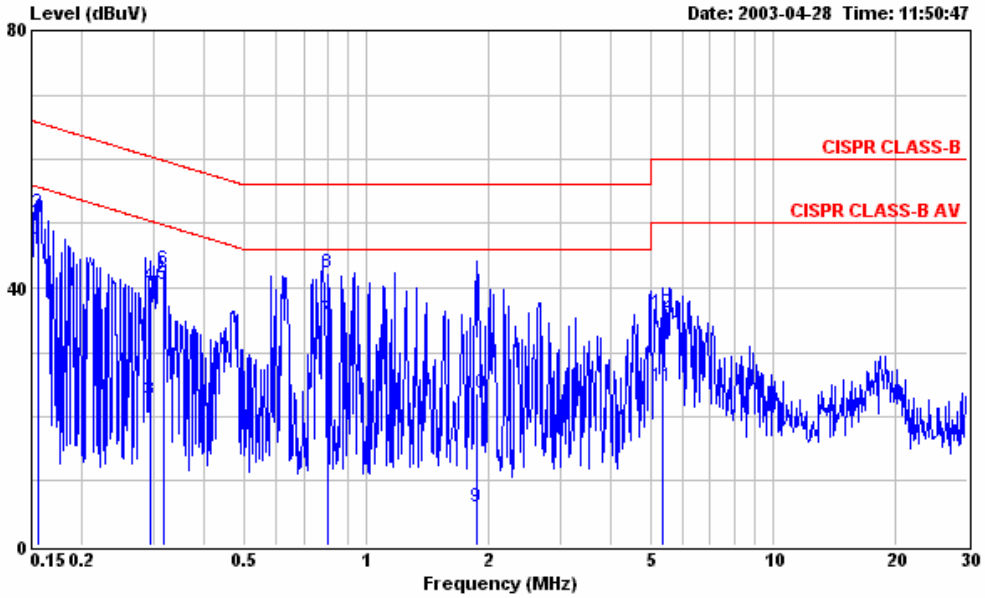
- Test Mode: Mode 9
- Frequency Range of Test: from 150KHz to 30 MHz
- 6dB Bandwidth: 9KHz
- Temperature: 27°C
- Relative Humidity: 63 %

**The test was passed at the minimum margin that marked by a frame in the following data**




Site : C001-HY
Condition : CISPR CLASS-B LISN2001/008 LINE
EUT : PDA
Power : 110V/60Hz
Memo : TX CH78 2480MHz
: Cradle
: 342404

| | Freq | Level | Over Limit | Limit Line | Read Level | Factor | Probe Factor | Cable Loss | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dBuV | dBuV | dB | dB | dB | |
| 1 | 0.151 | 52.32 | -13.62 | 65.94 | 52.01 | 0.31 | 0.10 | 0.21 | QP |
| 2 | 0.151 | 46.82 | -9.12 | 55.94 | 46.51 | 0.31 | 0.10 | 0.21 | Average |
| 3 | 0.300 | 42.97 | -17.26 | 60.23 | 42.70 | 0.27 | 0.10 | 0.17 | QP |
| 4 | 0.300 | 40.73 | -9.50 | 50.23 | 40.46 | 0.27 | 0.10 | 0.17 | Average |
| 5 | 0.735 | 9.15 | -36.85 | 46.00 | 8.87 | 0.28 | 0.10 | 0.18 | Average |
| 6 | 0.735 | 30.18 | -25.82 | 56.00 | 29.90 | 0.28 | 0.10 | 0.18 | QP |
| 7 | 1.260 | 7.60 | -38.40 | 46.00 | 7.36 | 0.24 | 0.10 | 0.14 | Average |
| 8 | 1.260 | 26.84 | -29.16 | 56.00 | 26.60 | 0.24 | 0.10 | 0.14 | QP |
| 9 | 1.900 | 7.33 | -38.67 | 46.00 | 7.17 | 0.16 | 0.10 | 0.06 | Average |
| 10 | 1.900 | 25.35 | -30.65 | 56.00 | 25.19 | 0.16 | 0.10 | 0.06 | QP |
| 11 | 5.360 | 21.44 | -28.56 | 50.00 | 21.13 | 0.31 | 0.20 | 0.11 | Average |
| 12 | 5.360 | 32.86 | -27.14 | 60.00 | 32.55 | 0.31 | 0.20 | 0.11 | QP |




Site : C001-HY
Condition : CISPR CLASS-B LISN2001/008 NEUTRAL
EUT : PDA
Power : 110V/60Hz
Memo : TX CH78 2480MHz
: Cradle
: 342404

| | Freq | Level | Over Limit | Limit Line | Read Level | Probe Factor | Cable Loss | Remark |
|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dBuV | dBuV | dB | dB | dB | |
| 1 | 0.156 | 45.99 | -9.68 | 55.67 | 45.68 | 0.31 | 0.10 | 0.21 | Average |
| 2 | 0.156 | 51.66 | -14.01 | 65.67 | 51.35 | 0.31 | 0.10 | 0.21 | QP |
| 3 | 0.293 | 22.61 | -27.82 | 50.43 | 22.34 | 0.27 | 0.10 | 0.17 | Average |
| 4 | 0.293 | 40.30 | -20.13 | 60.43 | 40.03 | 0.27 | 0.10 | 0.17 | QP |
| 5 | 0.318 | 40.41 | -9.35 | 49.76 | 40.14 | 0.27 | 0.10 | 0.17 | Average |
| 6 | 0.318 | 42.97 | -16.79 | 59.76 | 42.70 | 0.27 | 0.10 | 0.17 | QP |
| 7 | 0.800 | 34.98 | -11.02 | 46.00 | 34.70 | 0.28 | 0.10 | 0.18 | Average |
| 8 | 0.800 | 42.28 | -13.72 | 56.00 | 42.00 | 0.28 | 0.10 | 0.18 | QP |
| 9 | 1.866 | 5.98 | -40.02 | 46.00 | 5.82 | 0.16 | 0.10 | 0.06 | Average |
| 10 | 1.866 | 23.66 | -32.34 | 56.00 | 23.50 | 0.16 | 0.10 | 0.06 | QP |
| 11 | 5.330 | 24.68 | -25.32 | 50.00 | 24.37 | 0.31 | 0.20 | 0.11 | Average |
| 12 | 5.330 | 36.02 | -23.98 | 60.00 | 35.71 | 0.31 | 0.20 | 0.11 | QP |

Test Engineer : Jay

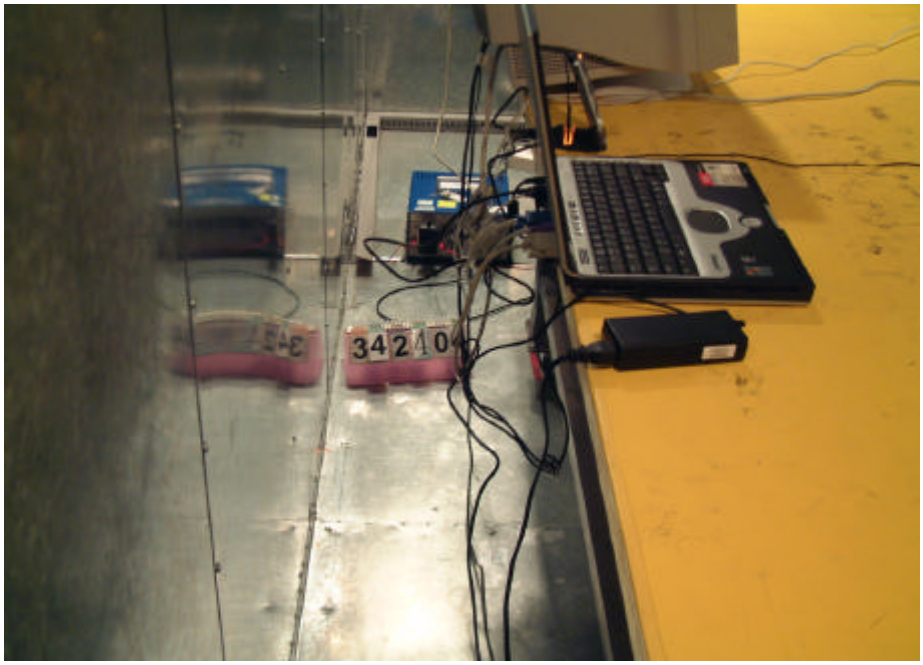
Jay Zhong

5.8.4. Photographs of Conducted Emission Test Configuration

- The photographs show the configuration that generates the maximum emission.

FRONT VIEW


REAR VIEW



SIDE VIEW

## 5.9. Test of Radiated Emission

Radiated emissions from 30 MHz to 24.8 GHz were measured according to the methods defines in ANSI C63.4-1992. The EUT was placed on a nonmetallic stand in the open-field site, 0.8 meter above the ground plane, as shown in section 4.6.3. The interface cables and equipment positions were varied within limits of reasonable applications to determine the positions producing maximum radiated emissions

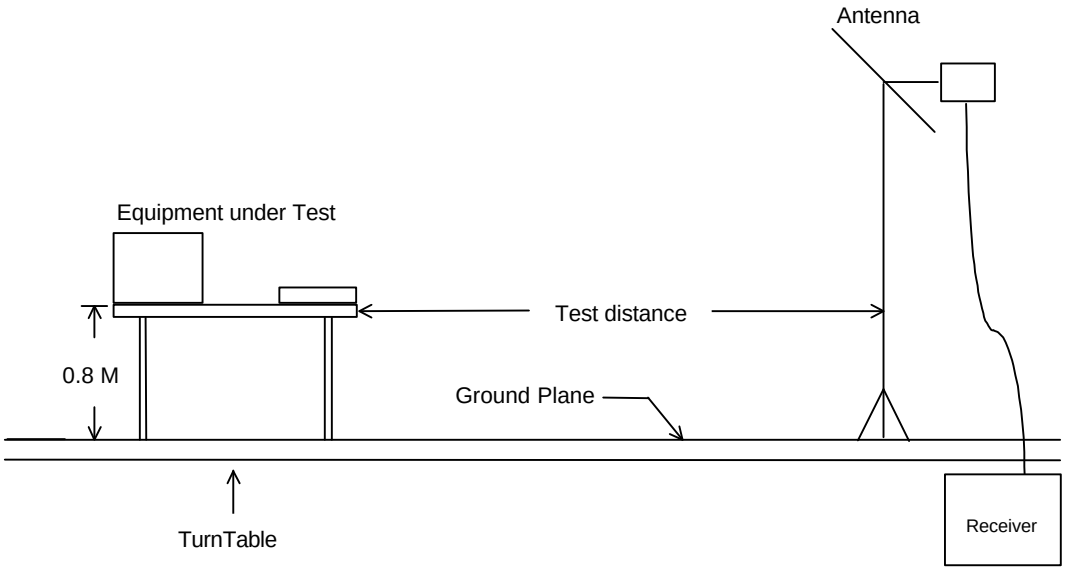
5.9.1. Major Measuring Instruments

| | |
|---|---|
| ● Amplifier | (MITEQ AFS44) |
| RF Gain | 40 dB |
| Signal Input | 100 MHz to 26.5 GHz |
| ● Amplifier | (HP 8447D) |
| RF Gain | 30 dB |
| Signal Input | 100 KHz to 1.3 GHz |
| ● Spectrum analyzer | (R&S FSP40) |
| Attenuation | 10 dB |
| Start Frequency | 1 GHz |
| Stop Frequency | 24 GHz |
| Resolution Bandwidth | 1 MHz |
| Video Bandwidth | 1 MHz |
| Signal Input | 9 KHz to 40 GHz |
| ● Test Receiver | (SCHAFFNER SCR3501) |
| Resolution Bandwidth | 120 KHz |
| Frequency Band | 9 K – 1 GHz |
| Quasi-Peak Detector | ON for Quasi-Peak Mode |
| | OFF for Peak Mode |

5.9.2. Test Procedures

1. The EUT was placed on a rotatable table top 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna is a broadband antenna and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both horizontal polarization and vertical polarization of the antenna are set to make the measurement.
5. For each suspected emission the EUT was arranged to its worst case and then tune the antenna tower (from 1 M to 4 M) and turn table (from 0 degree to 360 degrees) to find the maximum reading.
6. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.
7. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method and reported.
8. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

5.9.3. Typical Test Setup Layout of Radiated Emission



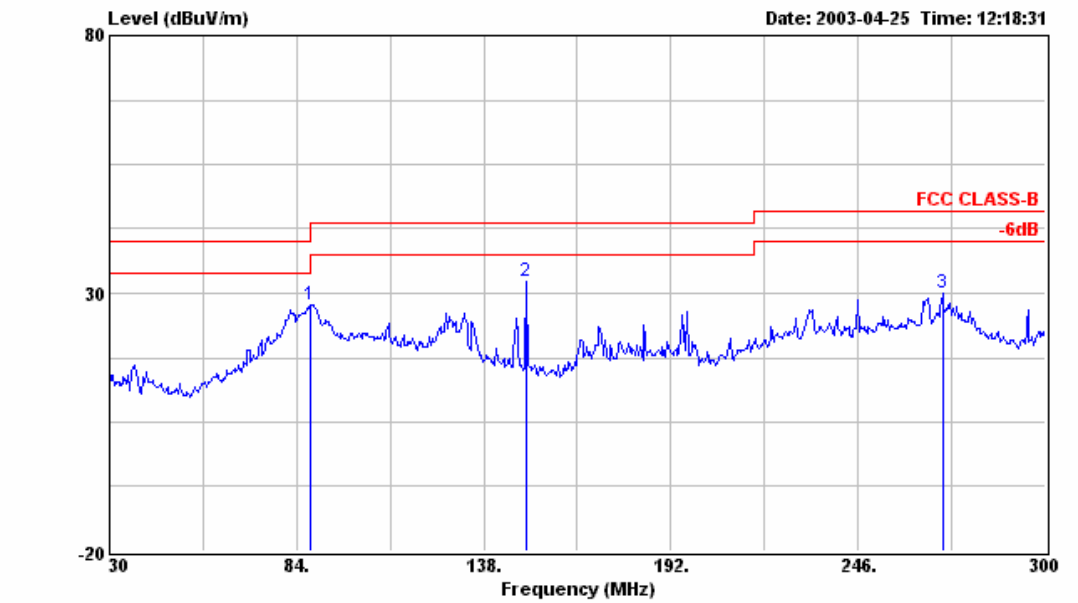
5.9.4. Test Result of Radiated Emission

- Test Mode: Mode 1
- Test Distance: 3 M
- Temperature: 27 °C
- Relative Humidity: 63 %
- Emission level (dBuV/m) = 20 log Emission level (uV/m)
- Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

**The test was passed at the minimum margin that marked by the frame in the following test record**

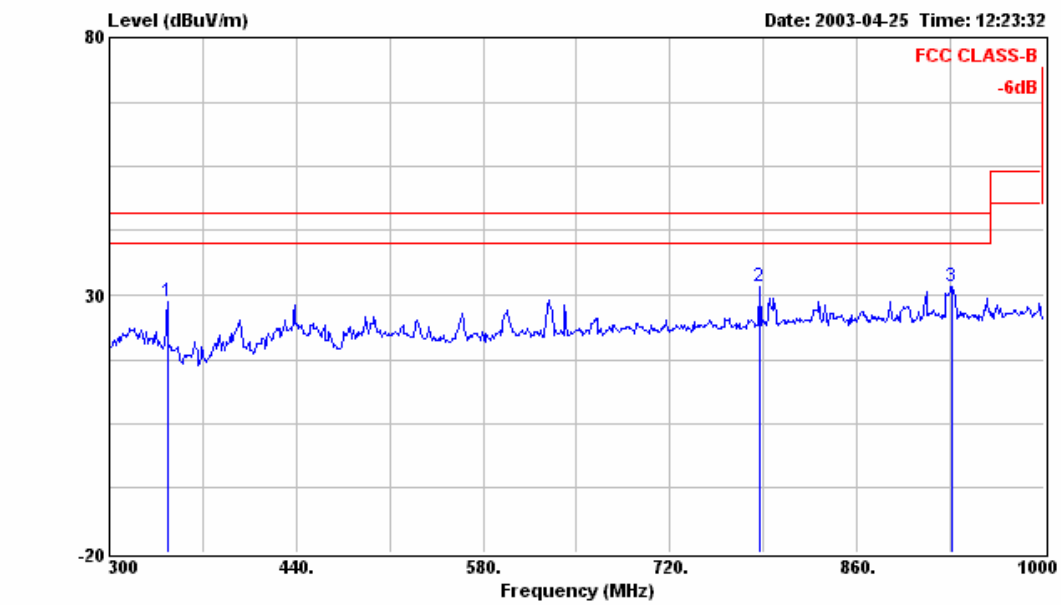
■ Spurious Emission

- For 30MHz to 1GHz



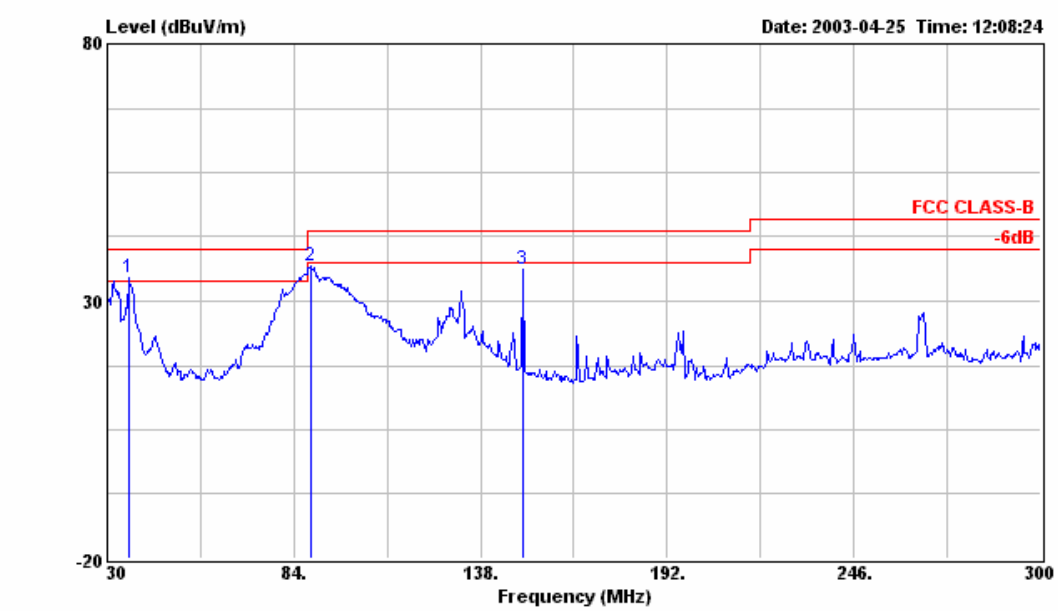

```
Site      : 03CH03-HY
Condition : 3m 03CH03-MAT HORIZONTAL
EUT       : Wireless PDA
Power     : 110V/60Hz
MODEL     : PE2060
MEMO      : TX CH00 2402MHz
          : Z342404
          : USB Cable-X
```

| | Freq | Level | Over Limit | Limit Line | Read Level | Probe Factor | Cable Loss | Preamp Factor | Remark | Ant Pos | Table Pos |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB | dB | dB | | cm | deg |
| 1 | 88.050 | 27.79 | -15.71 | 43.50 | 44.61 | 8.39 | 1.81 | 27.02 | Peak | --- | --- |
| 2 | 150.420 | 32.17 | -11.33 | 43.50 | 47.28 | 9.35 | 2.34 | 26.80 | Peak | --- | --- |
| 3 | 270.300 | 30.09 | -15.91 | 46.00 | 41.74 | 11.64 | 3.31 | 26.60 | Peak | --- | --- |



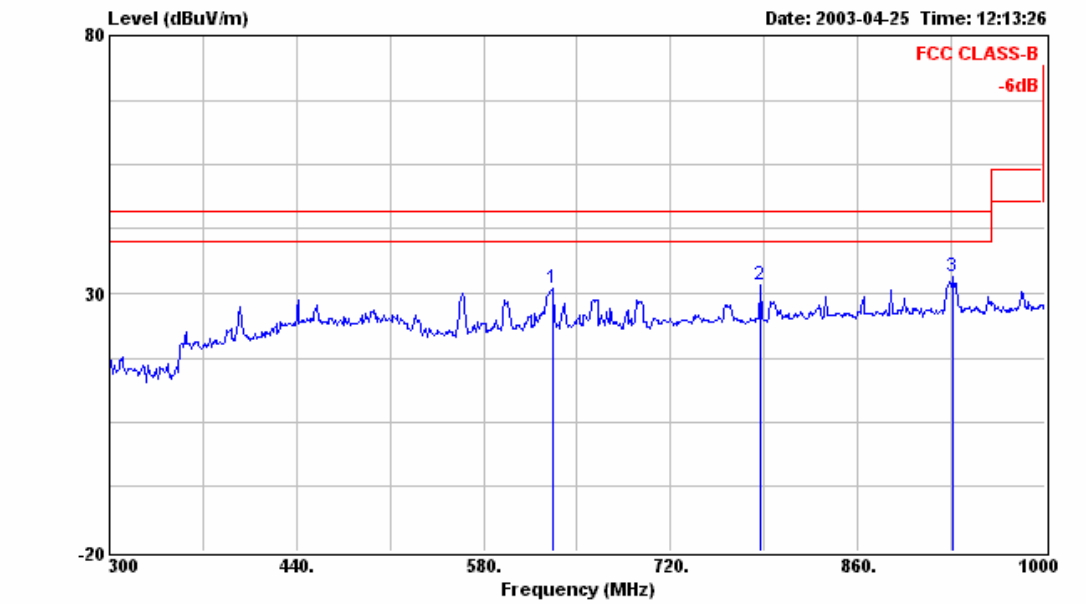

Site : 03CH03-HY
Condition : 3m 03CH03-MAT HORIZONTAL
EUT : Wireless PDA
Power : 110V/60Hz
MODEL : PE2060
MEMO : TX CH00 2402MHz
: Z342404
: USB Cable-X

| | Freq | Level | Over Limit | Limit Line | Read Level | Probe Factor | Cable Loss | Preamp Factor | Remark | Ant Pos | Table Pos |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB | dB | dB | | cm | deg |
| 1 | 343.400 | 28.77 | -17.23 | 46.00 | 39.07 | 12.79 | 3.77 | 26.86 | Peak | --- | --- |
| 2 | 786.500 | 31.50 | -14.50 | 46.00 | 34.48 | 18.68 | 6.34 | 28.00 | Peak | --- | --- |
| 3 | 931.400 | 31.59 | -14.41 | 46.00 | 32.75 | 19.52 | 7.03 | 27.71 | Peak | --- | --- |




Site : 03CH03-HY
Condition : 3m 03CH03-MAT VERTICAL
EUT : Wireless PDA
Power : 110V/60Hz
MODEL : PE2060
MEMO : TX CH00 2402MHz
: Z342404
: USB Cable-X

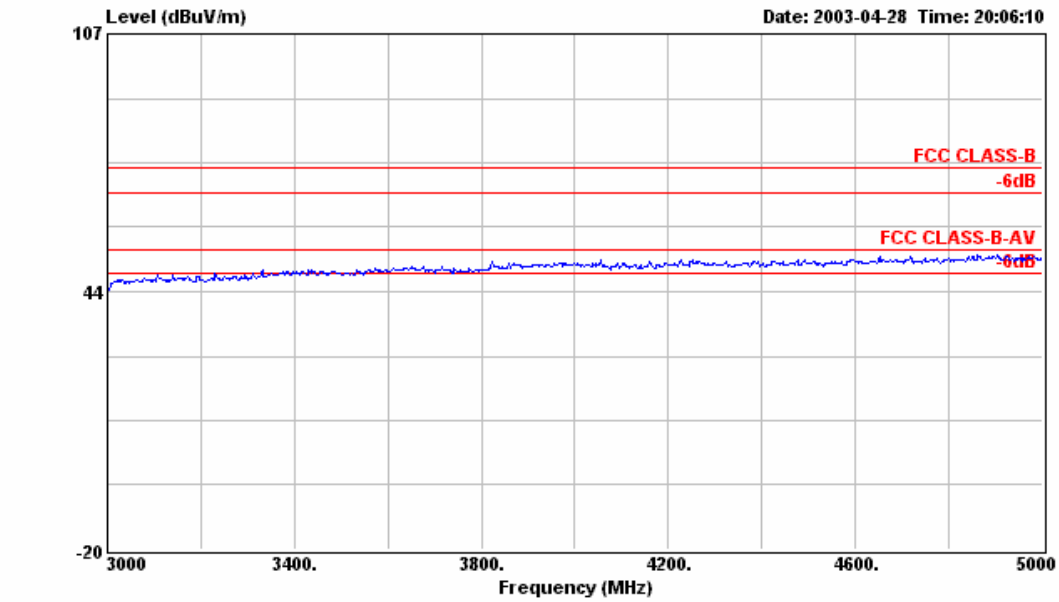
| | | Freq | Level | Over Limit | Limit Line | Read Level | Probe Factor | Cable Loss | Preamp Factor | Remark | Ant Pos | Table Pos |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBuV/m | dB | dBuV/m | dBuV | dB | dB | dB | | cm | deg |
| 1 | ! | 36.210 | 34.68 | -5.32 | 40.00 | 48.28 | 12.38 | 1.12 | 27.10 | Peak | 100 | 68 |
| 2 | | 88.860 | 36.70 | -6.80 | 43.50 | 53.25 | 8.65 | 1.82 | 27.02 | Peak | --- | --- |
| 3 | | 150.420 | 36.13 | -7.37 | 43.50 | 51.24 | 9.35 | 2.34 | 26.80 | Peak | --- | --- |



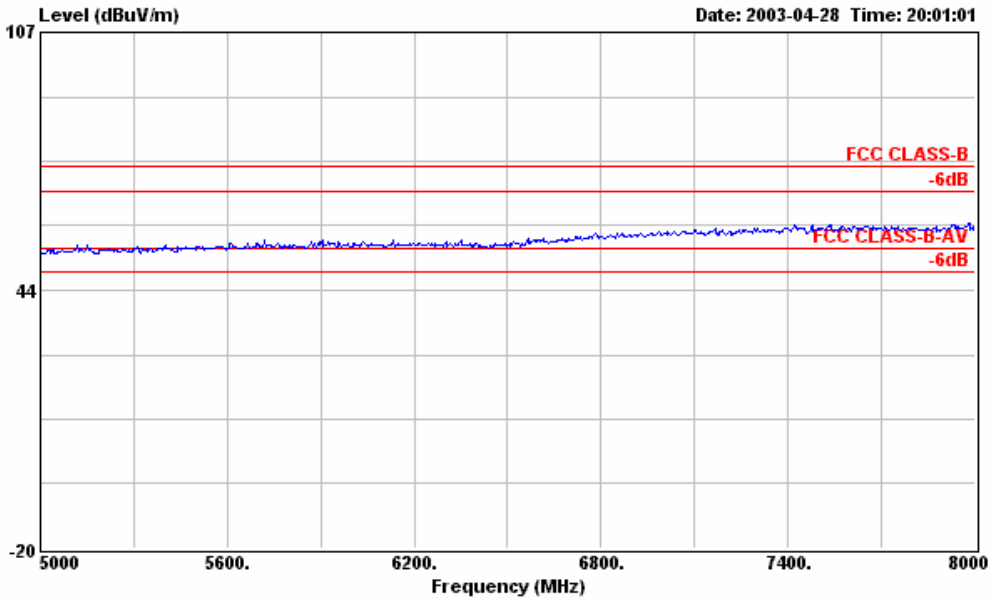

Site : 03CH03-HY
Condition : 3m 03CH03-MAT VERTICAL
EUT : Wireless PDA
Power : 110V/60Hz
MODEL : PE2060
MEMO : TX CH00 2402MHz
: Z342404
: USB Cable-X

| | Freq | Level | Over Limit | Limit Line | Read Level | Probe Factor | Cable Loss | Preamp Factor | Remark | Ant Pos | Table Pos |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB | dB | dB | | cm | deg |
| 1 | 631.800 | 30.97 | -15.03 | 46.00 | 35.78 | 17.51 | 5.68 | 28.00 | Peak | --- | --- |
| 2 | 786.500 | 31.59 | -14.41 | 46.00 | 34.57 | 18.68 | 6.34 | 28.00 | Peak | --- | --- |
| 3 | 931.400 | 33.27 | -12.73 | 46.00 | 34.43 | 19.52 | 7.03 | 27.71 | Peak | --- | --- |

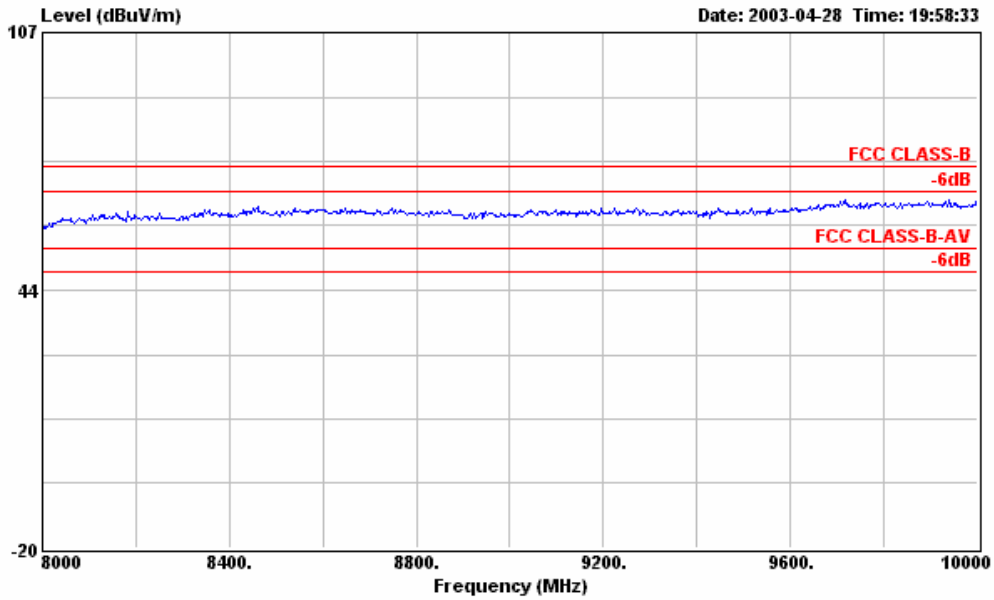
- For above 1GHz



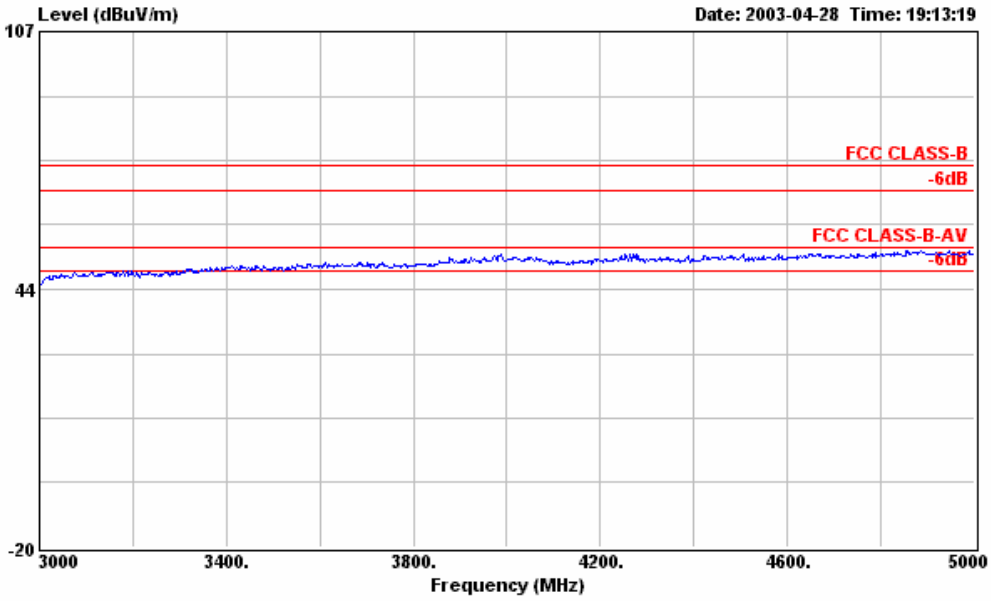

```
Site      : 03CH03-HY
Condition : 3m HORN-ANT-6741 HORIZONTAL
EUT       : Wireless PDA
Power     : 110V/60Hz
MODEL     : PE2060
MEMO      : TX CH00 2402MHz
          : Z342404
          : USB Cable-X
```



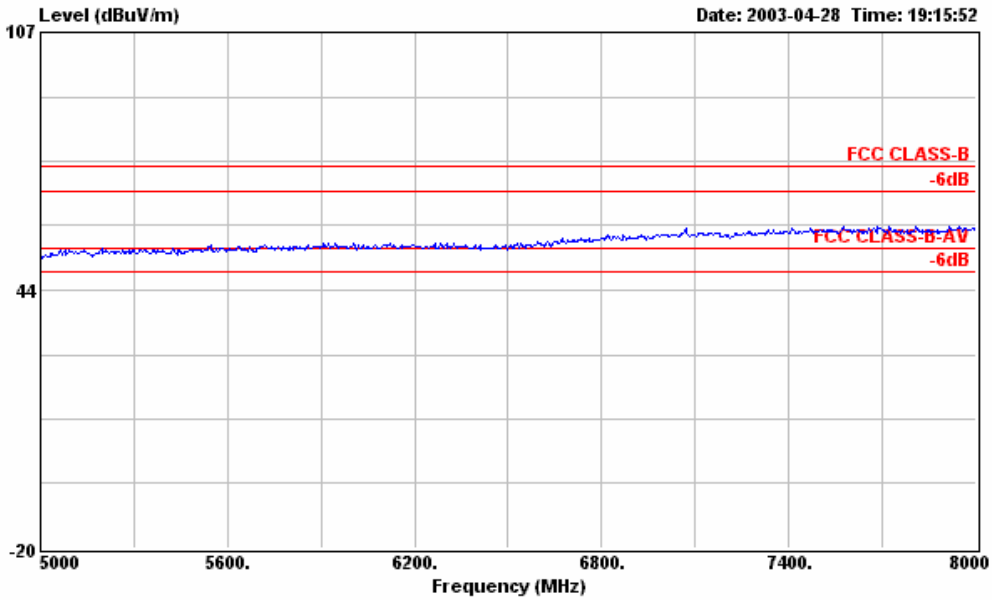

Site : 03CH03-HY
Condition : 3m HORN-ANT-6741 HORIZONTAL
EUT : Wireless PDA
Power : 110V/60Hz
MODEL : PE2060
MEMO : TX CH00 2402MHz
: Z342404
: USB Cable-X



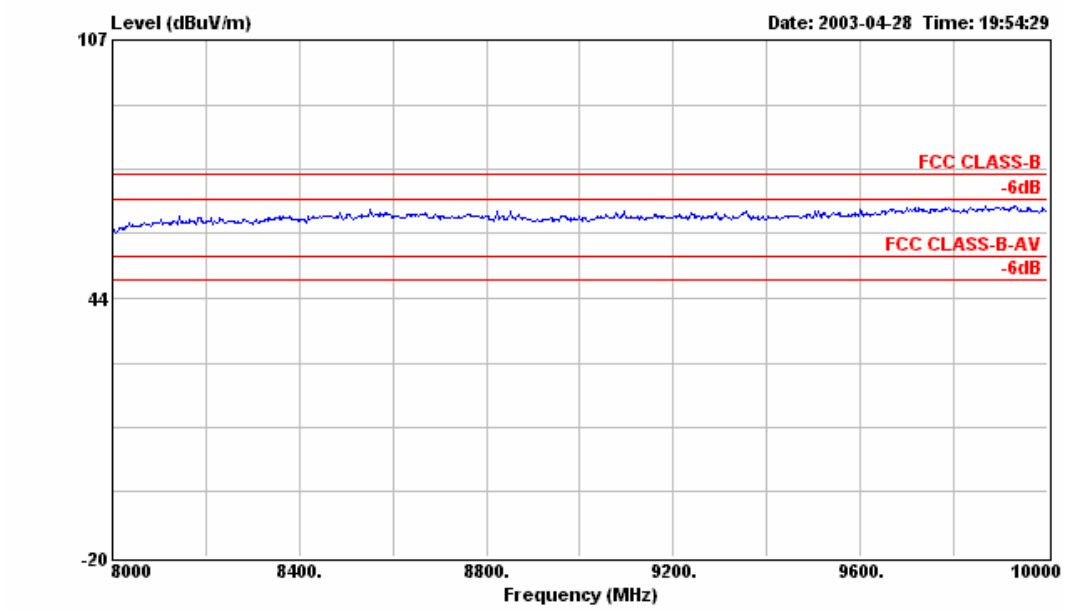

Site : 03CH03-HY
Condition : 3m HORN-ANT-6741 HORIZONTAL
EUT : Wireless PDA
Power : 110V/60Hz
MODEL : PE2060
MEMO : TX CH00 2402MHz
: Z342404
: USB Cable-X




Site : 03CH03-HY
Condition : 3m HORN-ANT-6741 VERTICAL
EUT : Wireless PDA
Power : 110V/60Hz
MODEL : PE2060
MEMO : TX CH00 2402MHz
: Z342404
: USB Cable-X




Site : 03CH03-HY
Condition : 3m HORN-ANT-6741 VERTICAL
EUT : Wireless PDA
Power : 110V/60Hz
MODEL : PE2060
MEMO : TX CH00 2402MHz
: Z342404
: USB Cable-X




Site : 03CH03-HY
Condition : 3m HORN-ANT-6741 VERTICAL
EUT : Wireless PDA
Power : 110V/60Hz
MODEL : PE2060
MEMO : TX CH00 2402MHz
: Z342404
: USB Cable-X

■ Field strength of fundamental and harmonics

| Frequency | Polarity | Antenna Factor | Cable Loss | Reading | Limits | | Emission | Level | Margin | Detect |
|---|---|---|---|---|---|---|---|---|---|---|
| ( MHz ) | | ( dB/m ) | ( dB ) | ( dBuV ) | (dBuV/m) | (uV/m) | ( dBuV/m ) | ( uV/m ) | ( dB ) | Mode |
| 2404.000 | H | 28.23 | 5.97 | 56.02 | - | - | 90.22 | 32433.96 | | Peak |
| 2404.000 | H | 28.23 | 5.97 | 30.49 | - | - | 64.69 | 1715.93 | | A.V. |
| 2404.000 | V | 28.23 | 5.97 | 53.81 | - | - | 88.01 | 25147.80 | | Peak |
| 2404.000 | V | 28.23 | 5.97 | 26.79 | - | - | 60.99 | 1120.73 | | A.V. |
| 4804.000 | V/H | | | | | | - | | | Peak, A.V. |
| 7206.000 | V/H | | | | | | - | | | Peak, A.V. |
| 9608.000 | V/H | | | | | | - | | | Peak, A.V. |
| 12010.000 | V/H | | | | | | - | | | Peak, A.V. |
| 14412.000 | V/H | | | | | | - | | | Peak, A.V. |
| 16814.000 | V/H | | | | | | - | | | Peak, A.V. |
| 19216.000 | V/H | | | | | | - | | | Peak, A.V. |
| 21618.000 | V/H | | | | | | - | | | Peak, A.V. |
| 24020.000 | V/H | | | | | | - | | | Peak, A.V. |

Remark: The emission emitted by the EUT is too low to be measured except the emission listed above

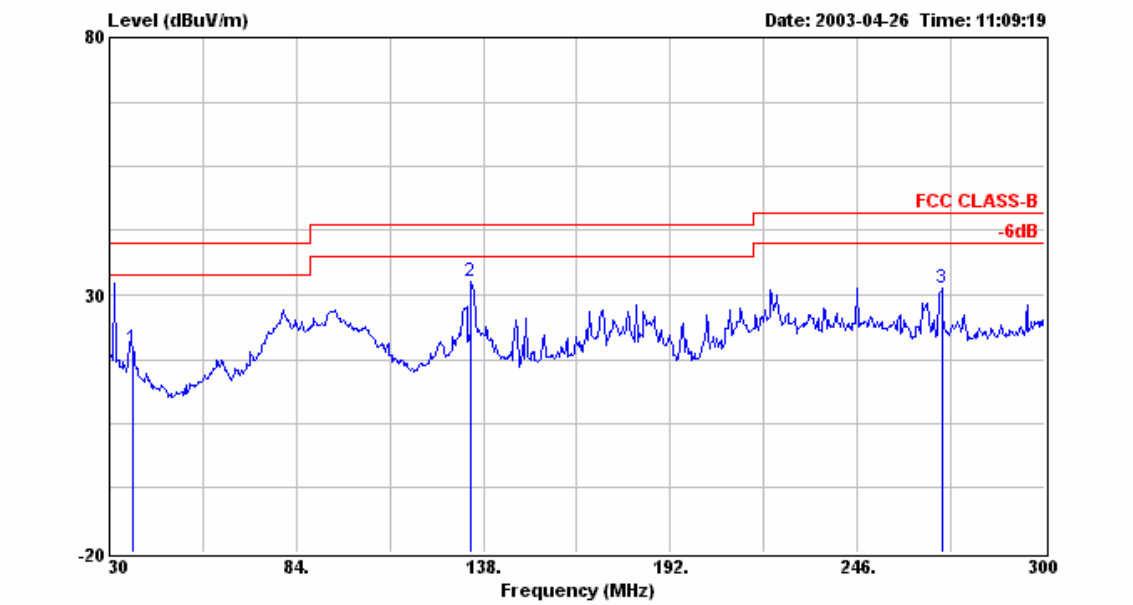
Test Engineer : Jay
Jay Zhong

- Test Mode: Mode 2
- Test Distance: 3 M
- Temperature: 27 °C
- Relative Humidity: 63 %
- Emission level (dBuV/m) = 20 log Emission level (uV/m)
- Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

**The test was passed at the minimum margin that marked by the frame in the following test record**

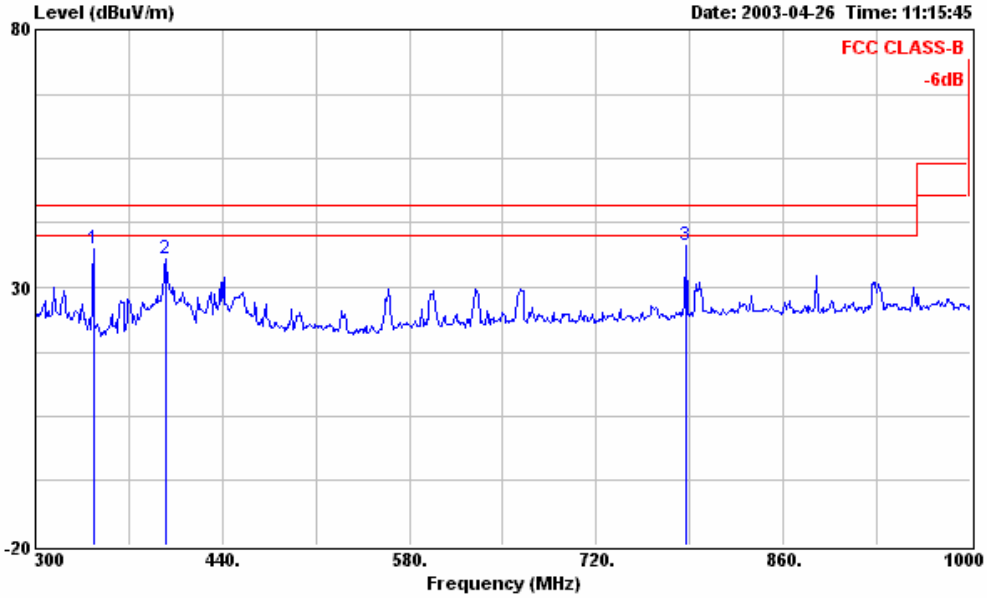
■ Spurious Emission

- For 30MHz to 1GHz



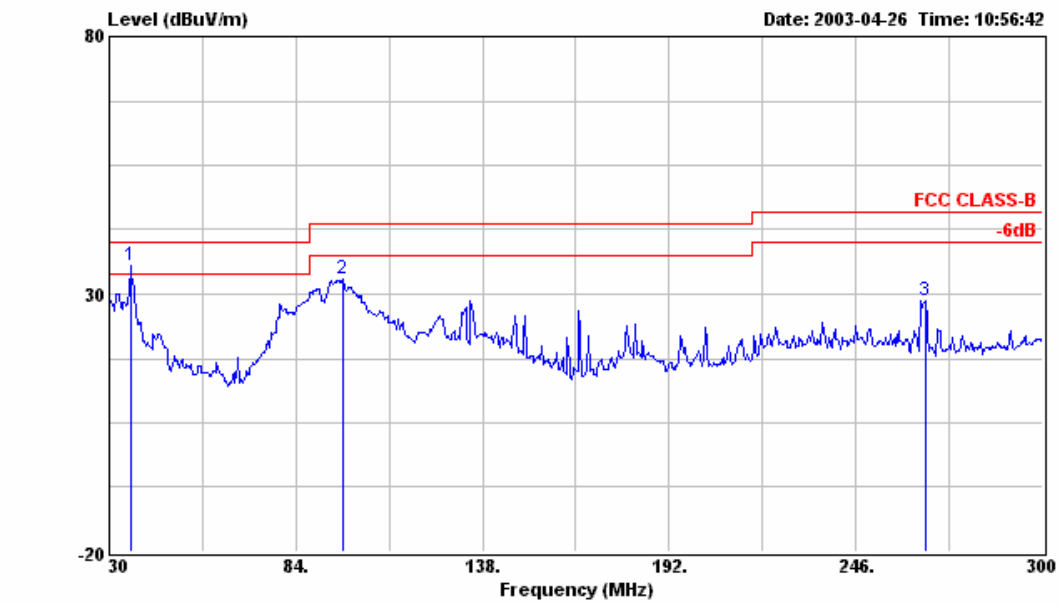

Site : 03CH03-HY
Condition : 3m 03CH03-MAT HORIZONTAL
EUT : Wireless PDA
Power : 110V/60Hz
MODEL : PE2060
MEMO : TX CH39 2441MHz
: Z342404
: USB Cable-X

| | Freq | Level | Over Limit | Limit Line | Read Level | Probe Factor | Cable Loss | Preamp Factor | Remark | Ant Pos | Table Pos |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB | dB | dB | | cm | deg |
| 1 | 36.750 | 19.68 | -20.32 | 40.00 | 33.48 | 12.17 | 1.13 | 27.10 | Peak | --- | --- |
| 2 | 134.490 | 32.61 | -10.89 | 43.50 | 46.86 | 10.41 | 2.20 | 26.86 | Peak | --- | --- |
| 3 | 270.300 | 31.16 | -14.84 | 46.00 | 42.81 | 11.64 | 3.31 | 26.60 | Peak | --- | --- |



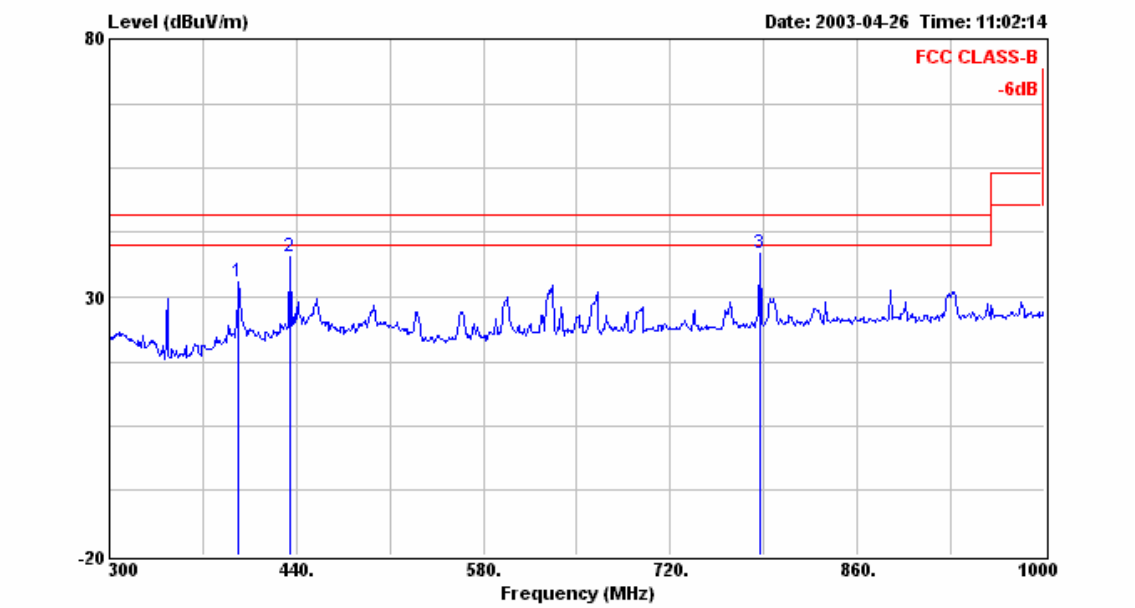

Site : 03CH03-HY
Condition : 3m 03CH03-MAT HORIZONTAL
EUT : Wireless PDA
Power : 110V/60Hz
MODEL : PE2060
MEMO : TX CH39 2441MHz
: Z342404
: USB Cable-X

| | Freq | Level | Over Limit | Limit Line | Read Level | Probe Factor | Cable Loss | Preamp Factor | Remark | Ant Pos | Table Pos |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB | dB | dB | | cm | deg |
| 1 | 343.400 | 37.57 | -8.43 | 46.00 | 47.87 | 12.79 | 3.77 | 26.86 | Peak | --- | --- |
| 2 | 397.300 | 35.38 | -10.62 | 46.00 | 43.95 | 14.54 | 4.07 | 27.18 | Peak | --- | --- |
| 3 | 786.500 | 38.21 | -7.79 | 46.00 | 41.19 | 18.68 | 6.34 | 28.00 | Peak | --- | --- |




Site : 03CH03-HY
Condition : 3m 03CH03-MAT VERTICAL
EUT : Wireless PDA
Power : 110V/60Hz
MODEL : PE2060
MEMO : TX CH39 2441MHz
: Z342404
: USB Cable-X

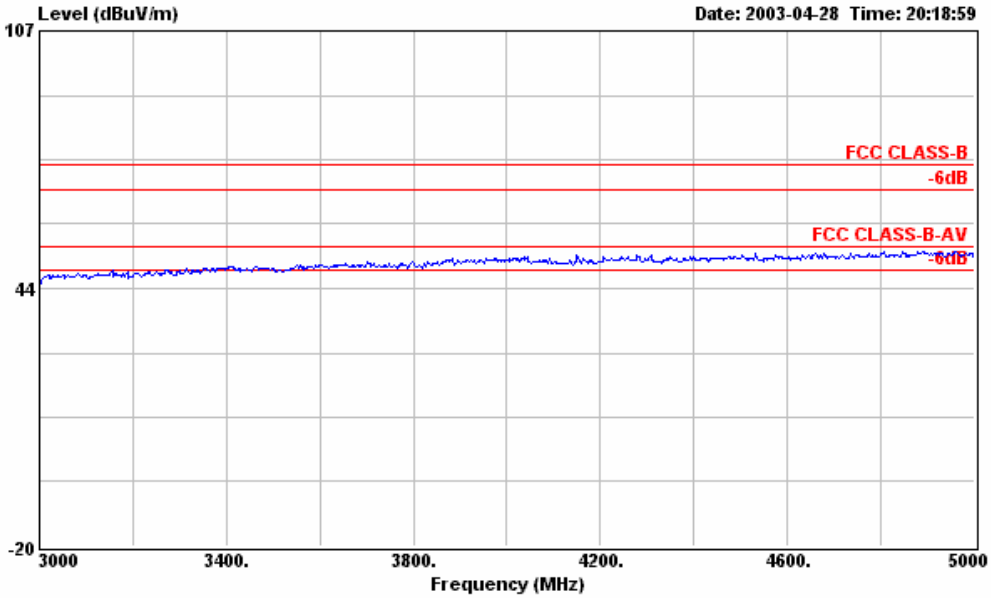
| | | Freq | Level | Over Limit | Limit Line | Read Level | Probe Factor | Cable Loss | Preamp Factor | Remark | Ant Pos | Table Pos |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBuV/m | dB | dBuV/m | dBuV | dB | dB | dB | | cm | deg |
| 1 | ! | 36.210 | 35.37 | -4.63 | 40.00 | 48.97 | 12.38 | 1.12 | 27.10 | Peak | 100 | 68 |
| 2 | | 97.500 | 32.96 | -10.54 | 43.50 | 48.86 | 9.22 | 1.88 | 27.00 | Peak | --- | --- |
| 3 | | 266.250 | 28.80 | -17.20 | 46.00 | 40.44 | 11.68 | 3.28 | 26.60 | Peak | --- | --- |



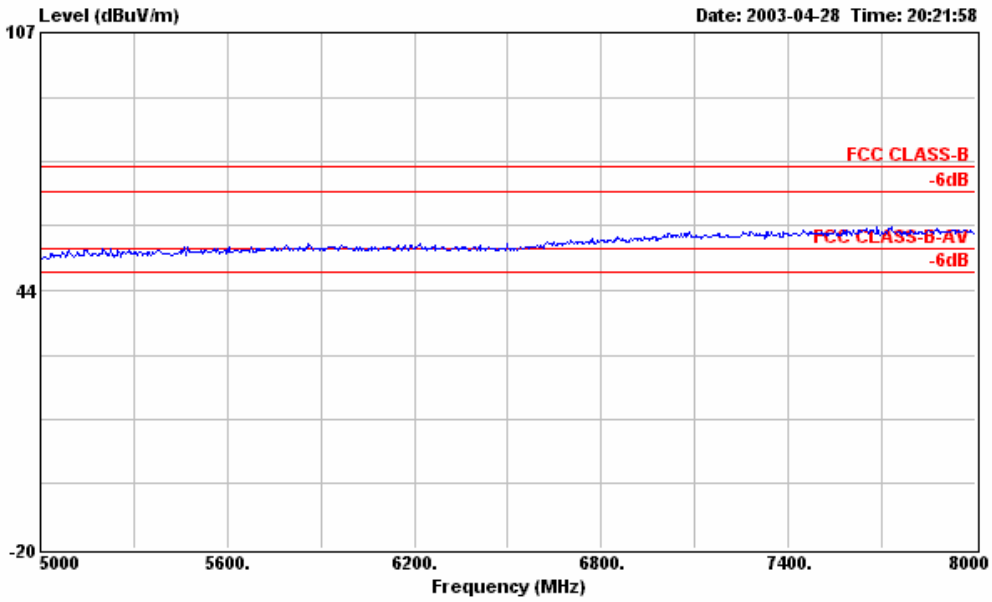

Site : 03CH03-HY
Condition : 3m 03CH03-MAT VERTICAL
EUT : Wireless PDA
Power : 110V/60Hz
MODEL : PE2060
MEMO : TX CH39 2441MHz
: Z342404
: USB Cable-X

| | Freq | Level | Over Limit | Limit Line | Read Level | Probe Factor | Cable Loss | Preamp Factor | Remark | Ant Pos | Table Pos |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB | dB | dB | | cm | deg |
| 1 | 396.600 | 33.00 | -13.00 | 46.00 | 41.59 | 14.52 | 4.07 | 27.18 | Peak | --- | --- |
| 2 | 435.800 | 37.84 | -8.16 | 46.00 | 45.84 | 15.14 | 4.24 | 27.38 | Peak | --- | --- |
| 3 | 786.500 | 38.32 | -7.68 | 46.00 | 41.30 | 18.68 | 6.34 | 28.00 | Peak | --- | --- |

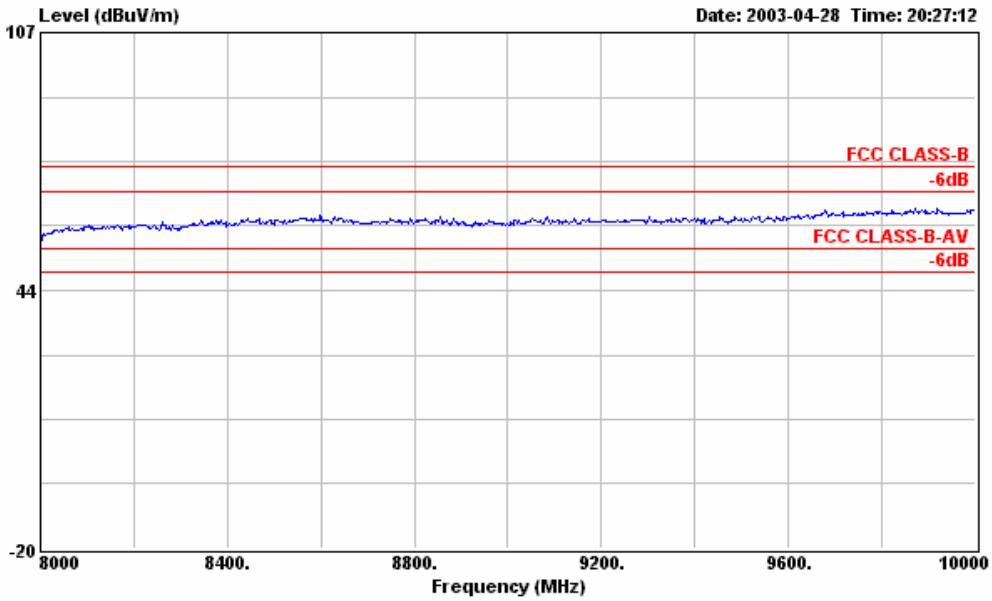
- For above 1GHz



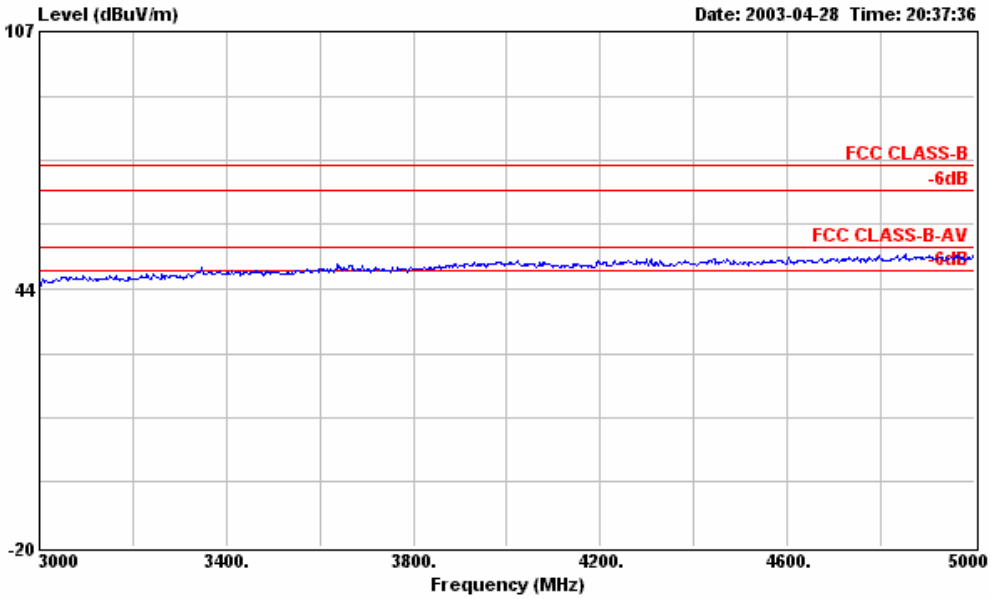

Site : 03CH03-HY
Condition : 3m HORN-ANT-6741 HORIZONTAL
EUT : Wireless PDA
Power : 110V/60Hz
MODEL : PE2060
MEMO : TX CH39 2441MHz
: Z342404
: USB Cable-X



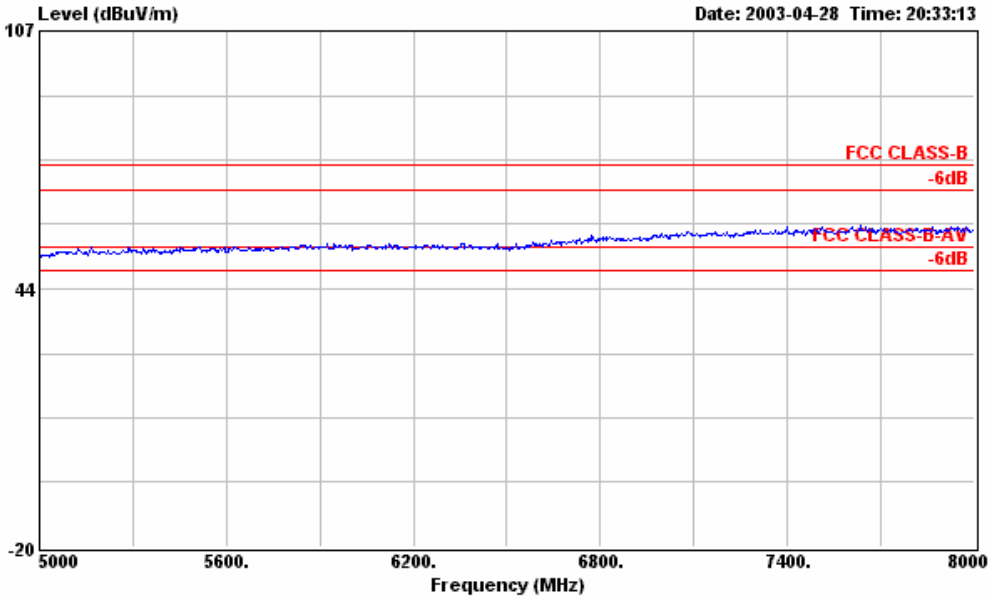

Site : 03CH03-HY
Condition : 3m HORN-ANT-6741 HORIZONTAL
EUT : Wireless PDA
Power : 110V/60Hz
MODEL : PE2060
MEMO : TX CH39 2441MHz
: Z342404
: USB Cable-X



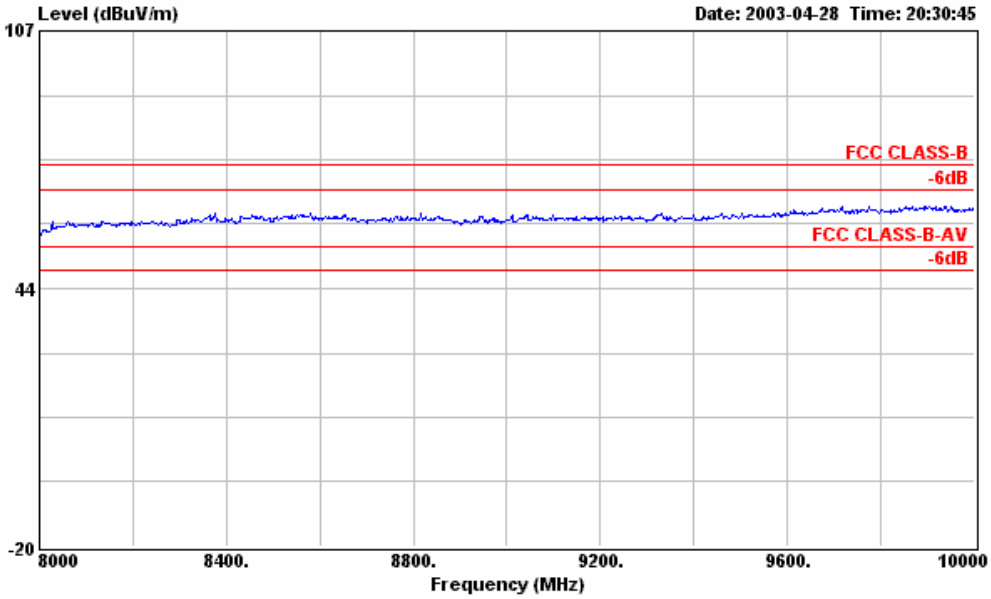

Site : 03CH03-HY
Condition : 3m HORN-ANT-6741 HORIZONTAL
EUT : Wireless PDA
Power : 110V/60Hz
MODEL : PE2060
MEMO : TX CH39 2441MHz
: Z342404
: USB Cable-X




```
Site      : 03CH03-HY
Condition : 3m HORN-ANT-6741 VERTICAL
EUT       : Wireless PDA
Power     : 110V/60Hz
MODEL     : PE2060
MEMO      : TX CH39 2441MHz
          : Z342404
          : USB Cable-X
```




Site : 03CH03-HY
Condition : 3m HORN-ANT-6741 VERTICAL
EUT : Wireless PDA
Power : 110V/60Hz
MODEL : PE2060
MEMO : TX CH39 2441MHz
: Z342404
: USB Cable-X




Site : 03CH03-HY
Condition : 3m HORN-ANT-6741 VERTICAL
EUT : Wireless PDA
Power : 110V/60Hz
MODEL : PE2060
MEMO : TX CH39 2441MHz
: Z342404
: USB Cable-X

■ Field strength of fundamental and harmonics

| Frequency | Polarity | Antenna Factor | Cable Loss | Reading | Limits | | Emission Level | | Margin | Detect |
|---|---|---|---|---|---|---|---|---|---|---|
| ( MHz ) | | ( dB/m ) | ( dB ) | ( dBuV ) | (dBuV/m) | (uV/m) | ( dBuV/m ) | ( uV/m ) | ( dB ) | Mode |
| 2444.000 | H | 28.31 | 6.02 | 58.28 | - | - | 92.61 | 42707.09 | | Peak |
| 2444.000 | H | 28.31 | 6.02 | 30.77 | - | - | 65.10 | 1798.87 | | A.V. |
| 2444.000 | V | 28.31 | 6.02 | 50.51 | - | - | 84.84 | 17458.22 | | Peak |
| 2444.000 | V | 28.31 | 6.02 | 27.55 | - | - | 61.88 | 1241.65 | | A.V. |
| 4882.000 | V/H | | | | | | - | | | Peak, A.V. |
| 7323.000 | V/H | | | | | | - | | | Peak, A.V. |
| 9764.000 | V/H | | | | | | - | | | Peak, A.V. |
| 12205.000 | V/H | | | | | | - | | | Peak, A.V. |
| 14646.000 | V/H | | | | | | - | | | Peak, A.V. |
| 17087.000 | V/H | | | | | | - | | | Peak, A.V. |
| 19528.000 | V/H | | | | | | - | | | Peak, A.V. |
| 21969.000 | V/H | | | | | | - | | | Peak, A.V. |
| 24410.000 | V/H | | | | | | - | | | Peak, A.V. |

Remark: The emission emitted by the EUT is too low to be measured except the emission listed above

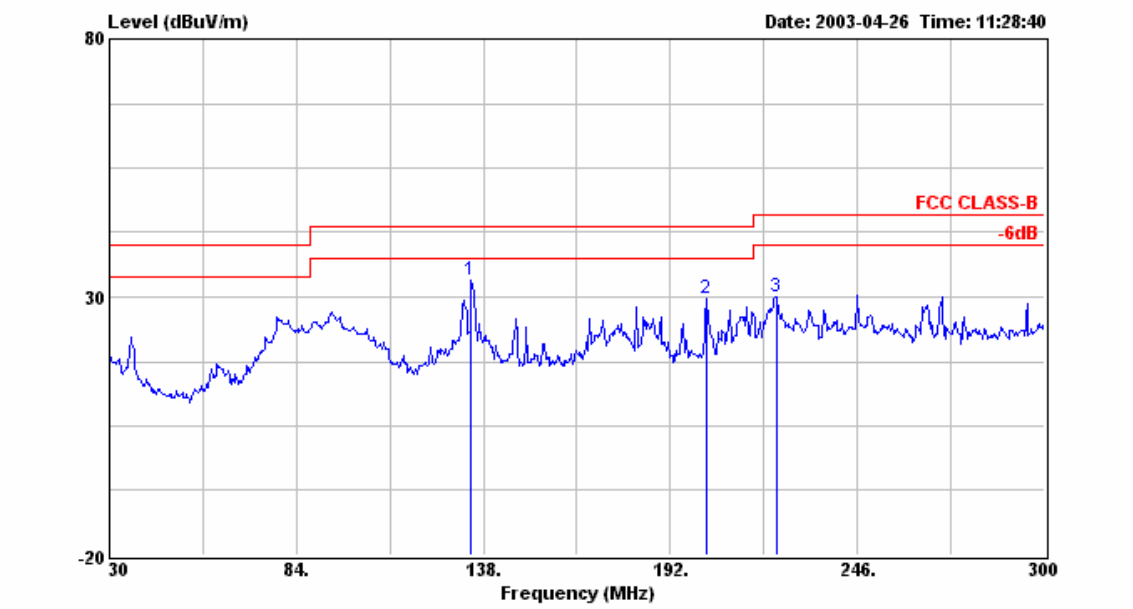
Test Engineer : Jay Zhong

- Test Mode: Mode 3
- Test Distance: 3 M
- Temperature: 27 °C
- Relative Humidity: 63 %
- Emission level (dBuV/m) = 20 log Emission level (uV/m)
- Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

**The test was passed at the minimum margin that marked by the frame in the following test record**

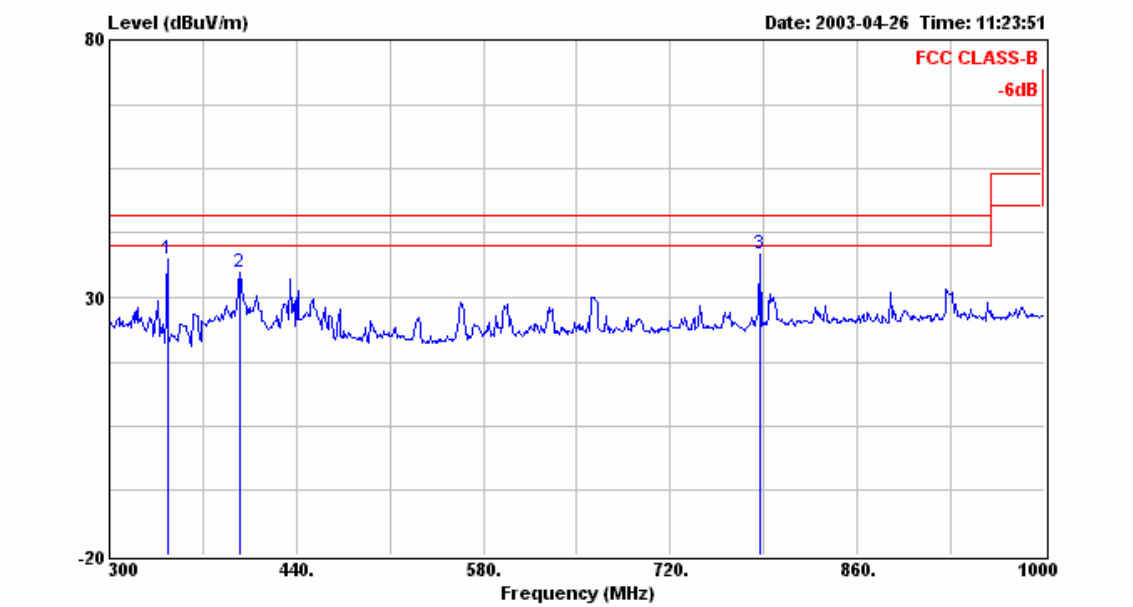
■ Spurious Emission

- For 30MHz to 1GHz



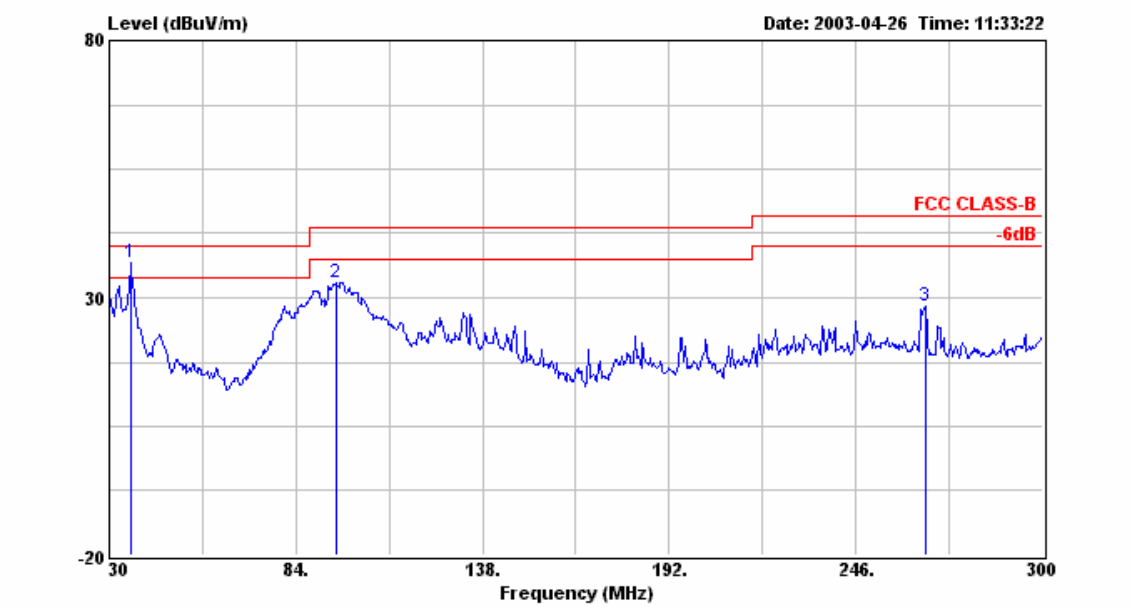

Site : 03CH03-HY
Condition : 3m 03CH03-MAT HORIZONTAL
EUT : Wireless PDA
Power : 110V/60Hz
MODEL : PE2060
MEMO : TX CH78 2480MHz
: Z342404
: USB Cable-X

| | Freq | Level | Over Limit | Limit Line | Read Level | Probe Factor | Cable Loss | Preamp Factor | Remark | Ant Pos | Table Pos |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB | dB | dB | | cm | deg |
| 1 | 134.490 | 33.40 | -10.10 | 43.50 | 47.65 | 10.41 | 2.20 | 26.86 | Peak | --- | --- |
| 2 | 202.260 | 29.61 | -13.89 | 43.50 | 45.93 | 7.48 | 2.80 | 26.60 | Peak | --- | --- |
| 3 | 222.780 | 30.06 | -15.94 | 46.00 | 44.30 | 9.40 | 2.96 | 26.60 | Peak | --- | --- |



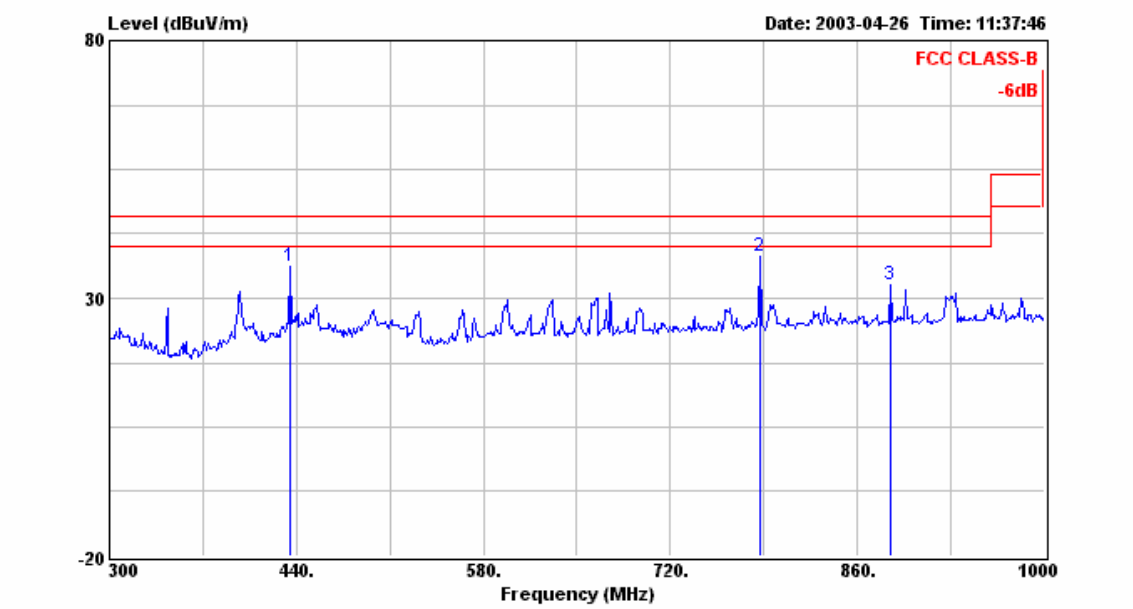

Site : 03CH03-HY
Condition : 3m 03CH03-MAT HORIZONTAL
EUT : Wireless PDA
Power : 110V/60Hz
MODEL : PE2060
MEMO : TX CH78 2480MHz
: Z342404
: USB Cable-X

| | Freq | Level | Over Limit | Limit Line | Read Level | Probe Factor | Cable Loss | Preamp Factor | Remark | Ant Pos | Table Pos |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB | dB | dB | | cm | deg |
| 1 | 343.400 | 37.33 | -8.67 | 46.00 | 47.63 | 12.79 | 3.77 | 26.86 | Peak | --- | --- |
| 2 | 397.300 | 34.94 | -11.06 | 46.00 | 43.51 | 14.54 | 4.07 | 27.18 | Peak | --- | --- |
| 3 | 786.500 | 38.31 | -7.69 | 46.00 | 41.29 | 18.68 | 6.34 | 28.00 | Peak | --- | --- |




Site : 03CH03-HY
Condition : 3m 03CH03-MAT VERTICAL
EUT : Wireless PDA
Power : 110V/60Hz
MODEL : PE2060
MEMO : TX CH78 2480MHz
: Z342404
: USB Cable-X

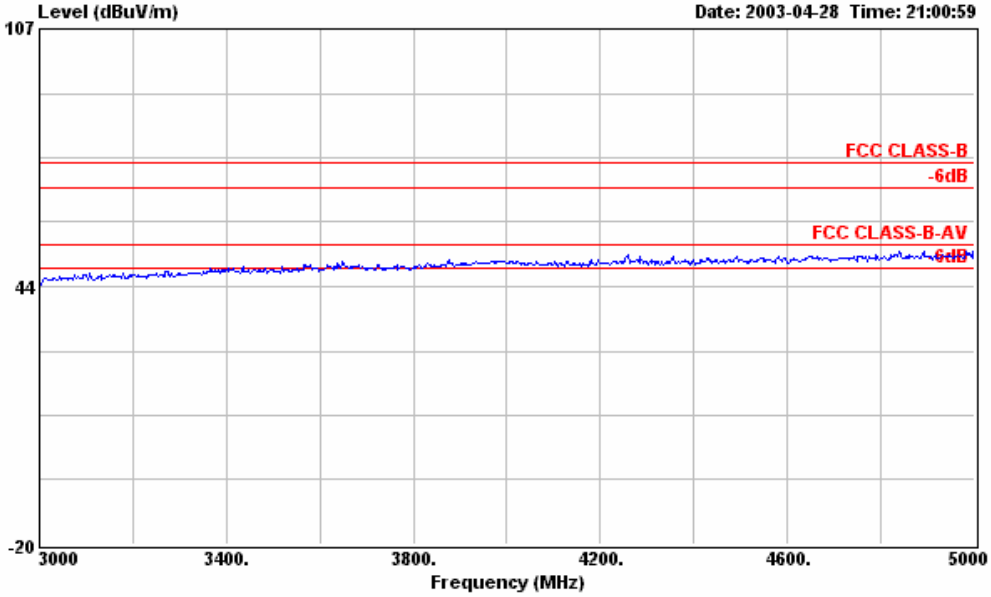
| | Freq | Level | Over Limit | Limit Line | Read Level | Probe Factor | Cable Loss | Preamp Factor | Remark | Ant Pos | Table Pos |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB | dB | dB | | cm | deg |
| 1 ! | 36.210 | 36.83 | -3.17 | 40.00 | 50.43 | 12.38 | 1.12 | 27.10 | Peak | 100 | 68 |
| 2 | 95.610 | 33.07 | -10.43 | 43.50 | 49.11 | 9.11 | 1.86 | 27.01 | Peak | --- | --- |
| 3 | 265.980 | 28.49 | -17.51 | 46.00 | 40.12 | 11.69 | 3.28 | 26.60 | Peak | --- | --- |



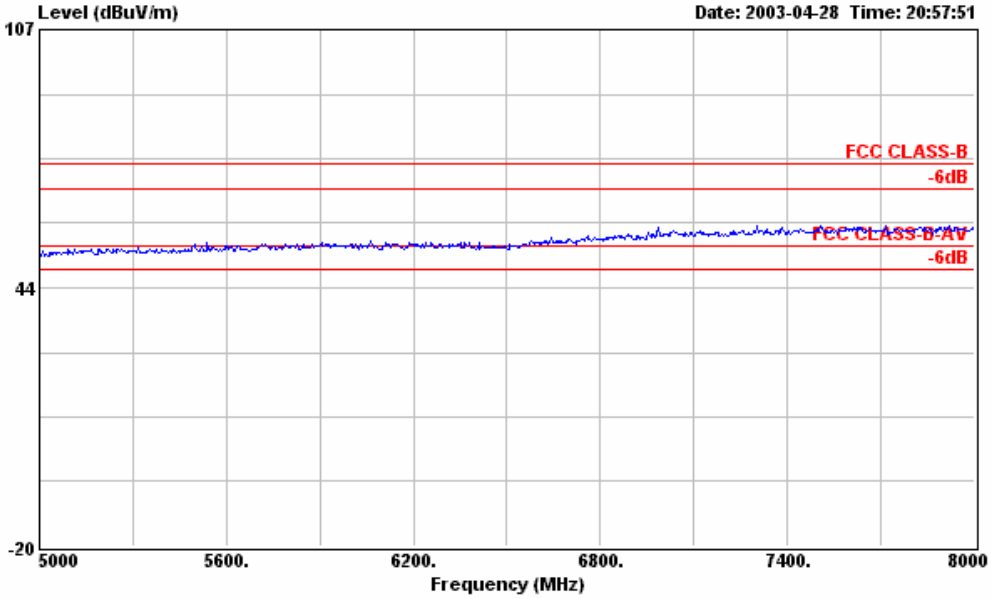

Site : 03CH03-HY
Condition : 3m 03CH03-MAT VERTICAL
EUT : Wireless PDA
Power : 110V/60Hz
MODEL : PE2060
MEMO : TX CH78 2480MHz
: Z342404
: USB Cable-X

| | Freq | Level | Over Limit | Limit Line | Read Level | Probe Factor | Cable Loss | Preamp Factor | Remark | Ant Pos | Table Pos |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV/m | dB | dBuV/m | dBuV | dB | dB | dB | | cm | deg |
| 1 | 435.800 | 36.13 | -9.87 | 46.00 | 44.13 | 15.14 | 4.24 | 27.38 | Peak | --- | --- |
| 2 | 786.500 | 38.25 | -7.75 | 46.00 | 41.23 | 18.68 | 6.34 | 28.00 | Peak | --- | --- |
| 3 | 884.500 | 32.44 | -13.56 | 46.00 | 34.16 | 19.32 | 6.79 | 27.83 | Peak | --- | --- |

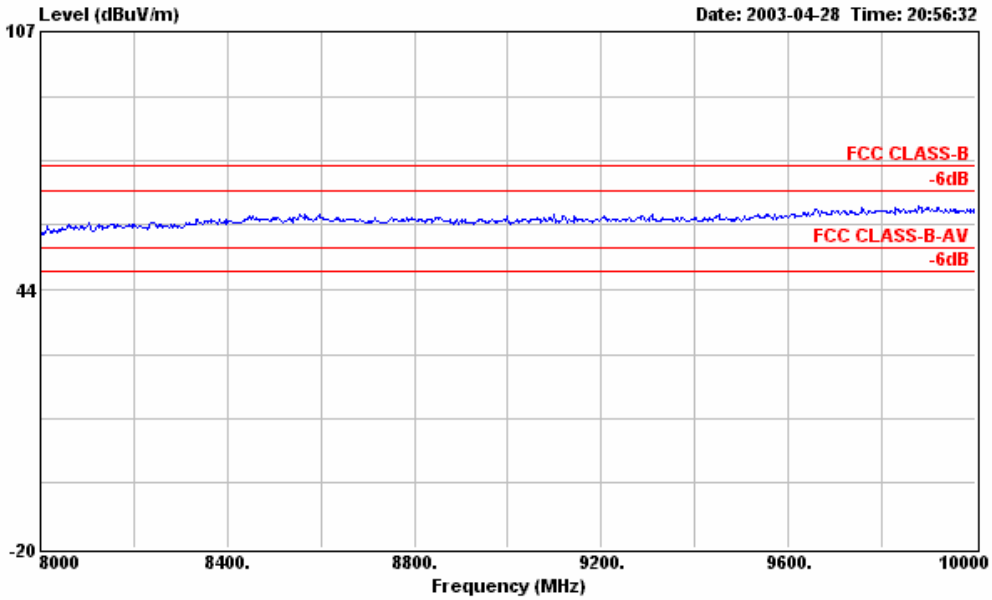
- For above 1GHz



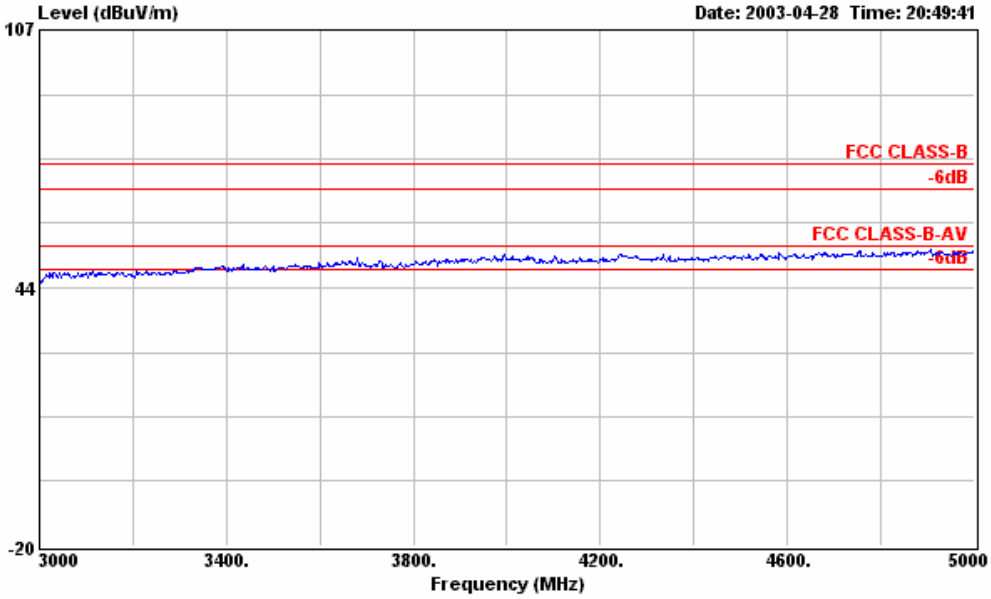

```
Site      : 03CH03-HY
Condition : 3m HORN-ANT-6741 HORIZONTAL
EUT       : Wireless PDA
Power     : 110V/60Hz
MODEL     : PE2060
MEMO      : TX CH78 2480MHz
          : Z342404
          : USB Cable-X
```



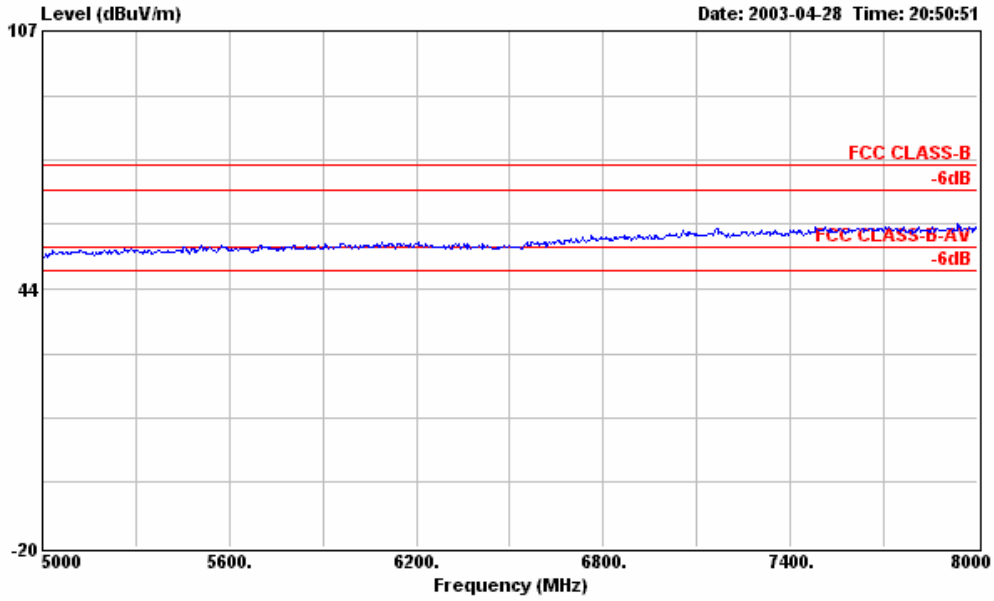

Site : 03CH03-HY
Condition : 3m HORN-ANT-6741 HORIZONTAL
EUT : Wireless PDA
Power : 110V/60Hz
MODEL : PE2060
MEMO : TX CH78 2480MHz
: Z342404
: USB Cable-X



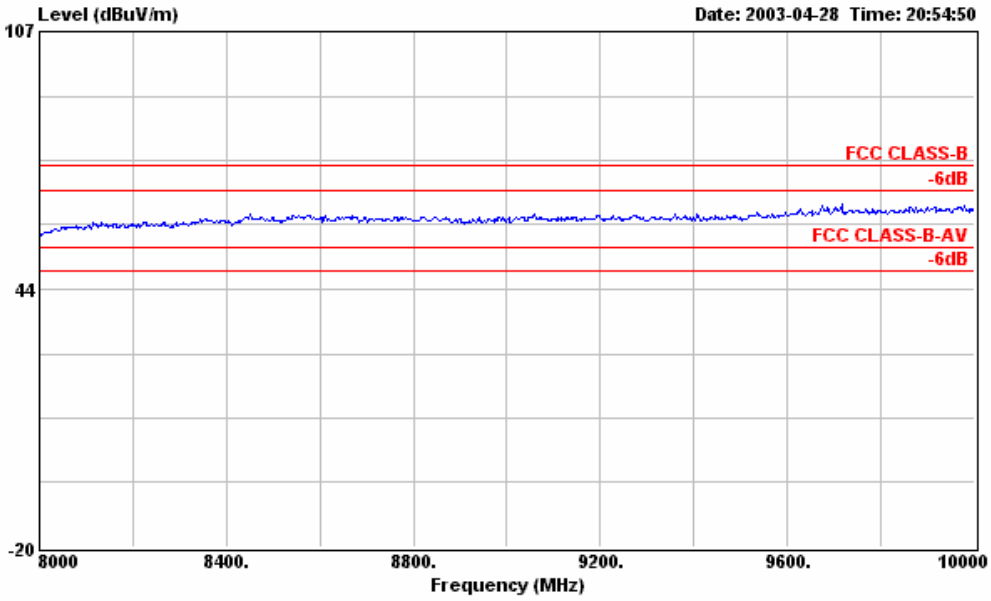

Site : 03CH03-HY
Condition : 3m HORN-ANT-6741 HORIZONTAL
EUT : Wireless PDA
Power : 110V/60Hz
MODEL : PE2060
MEMO : TX CH78 2480MHz
: Z342404
: USB Cable-X




Site : 03CH03-HY
Condition : 3m HORN-ANT-6741 VERTICAL
EUT : Wireless PDA
Power : 110V/60Hz
MODEL : PE2060
MEMO : TX CH78 2480MHz
: Z342404
: USB Cable-X




Site : 03CH03-HY
Condition : 3m HORN-ANT-6741 VERTICAL
EUT : Wireless PDA
Power : 110V/60Hz
MODEL : PE2060
MEMO : TX CH78 2480MHz
: Z342404
: USB Cable-X




```
Site      : 03CH03-HY
Condition : 3m HORN-ANT-6741 VERTICAL
EUT       : Wireless PDA
Power     : 110V/60Hz
MODEL     : PE2060
MEMO      : TX CH78 2480MHz
          : Z342404
          : USB Cable-X
```

■ Field strength of fundamental and harmonics

| Frequency | Polarity | Antenna Factor | Cable Loss | Reading | Limits | | Emission Level | | Margin | Detect |
|---|---|---|---|---|---|---|---|---|---|---|
| ( MHz ) | | ( dB/m ) | ( dB ) | ( dBuV ) | (dBuV/m) | (uV/m) | ( dBuV/m ) | ( uV/m ) | ( dB ) | Mode |
| 2478.000 | H | 28.38 | 6.06 | 54.47 | - | - | 88.91 | 27893.31 | | Peak |
| 2478.000 | H | 28.38 | 6.06 | 29.20 | - | - | 63.64 | 1520.55 | | A.V. |
| 2478.000 | V | 28.38 | 6.06 | 52.02 | - | - | 86.46 | 21037.78 | | Peak |
| 2478.000 | V | 28.38 | 6.06 | 28.69 | - | - | 63.13 | 1433.84 | | A.V. |
| 4960.000 | V/H | | | | | | - | | | Peak, A.V. |
| 7440.000 | V/H | | | | | | - | | | Peak, A.V. |
| 9920.000 | V/H | | | | | | - | | | Peak, A.V. |
| 12400.000 | V/H | | | | | | - | | | Peak, A.V. |
| 14880.000 | V/H | | | | | | - | | | Peak, A.V. |
| 17360.000 | V/H | | | | | | - | | | Peak, A.V. |
| 19840.000 | V/H | | | | | | - | | | Peak, A.V. |
| 22320.000 | V/H | | | | | | - | | | Peak, A.V. |
| 24800.000 | V/H | | | | | | - | | | Peak, A.V. |

Remark: The emission emitted by the EUT is too low to be measured except the emission listed above

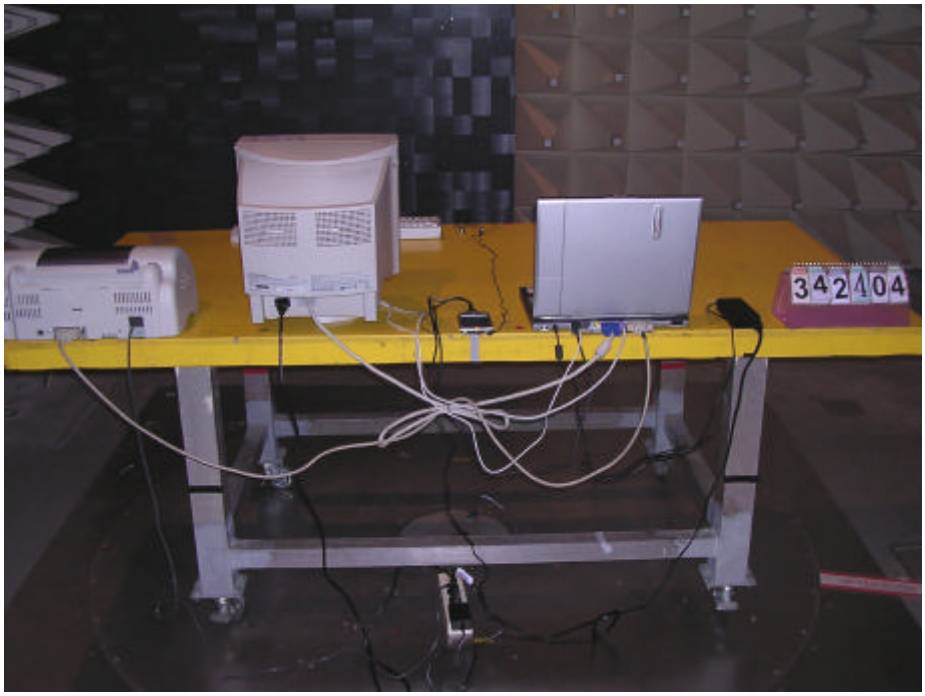
Test Engineer : Jay Zhong

5.9.5. Photographs of Radiated Emission Test Configuration

- The photographs show the configuration that generates the maximum emission.

FRONT VIEW


REAR VIEW



# 6. Antenna Requirements

The EUT use a undetachable antenna. It is considered meet antenna requirement of FCC.

6.1.1. Standard Applicable

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.

6.1.2. Antenna Connected Construction

The maximum Gain antenna used in this product is dipole antenna.

# 7. RF Exposure

FCC Rules and Regulations Part 1.1307,1.1310,2.1091,2.1093:

RF Exposure Compliance

7.1.1. Limit For Maximum Permissible Exposure (MPE)

(A) Limits for Occupational / Controlled Exposure

| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) ($mW/cm^2$) | Averaging Time $\|E\|^2$,$\|H\|^2$ or S (minutes) |
|---|---|---|---|---|
| 0.3-3.0 | 614 | 1.63 | (100)* | 6 |
| 3.0-30 | 1842/f | 4.89/f | (900/f)* | 6 |
| 30-300 | 61.4 | 0.163 | 1.0 | 6 |
| 300-1500 | | | F/300 | 6 |
| 1500-100,000 | | | 5 | 6 |

(B) Limits for General Population / Uncontrolled Exposure

| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) ($mW/cm^2$) | Averaging Time $\|E\|^2$,$\|H\|^2$ or S ( minutes ) |
|---|---|---|---|---|
| 0.3-1.34 | 614 | 1.63 | (100)* | 30 |
| 1.34-30 | 824/f | 2.19/f | (180/f)* | 30 |
| 30-300 | 27.5 | 0.073 | 0.2 | 30 |
| 300-1500 | | | F/1500 | 30 |
| 1500-100,000 | | | 1.0 | 30 |

F=frequency in MHz *Plane-wave equivalent power density

7.1.2. MPE Calculations

$$E\ (V/m) = \frac{\sqrt{30 \times P \times G}}{d} \qquad \text{Power Density: } Pd\ (mW/cm^2) = \frac{E^2}{3770}$$

E= Electric field (V/m)

P= Peak output power (mW)

G= Antenna numeric gain (numeric)

d= Separation distance (m)

Because the EUT is belong to General Population/ Uncontrolled Exposure. So the Limit of Power Density is 10 W/m². We can change the formula to:

$$d = \sqrt{\frac{30 \times P \times G}{3770}}$$

| Channel NO. | Antenna Gain (dBi) | Antenna Gain (numeric) | Peak Output Power (dBm) | Peak Output Power (W) | Calculated RF Exposure Separation Distance ( m ) | Minimum RF Exposure Separation Distance ( m ) |
|---|---|---|---|---|---|---|
| Channel 1 | 2.00 | 1.58 | -4.29 | 0.0004 | 0.0022 | 0.20 |
| Channel 6 | 2.00 | 1.58 | -4.79 | 0.0003 | 0.0020 | 0.20 |
| Channel 11 | 2.00 | 1.58 | -5.07 | 0.0003 | 0.0020 | 0.20 |

7.1.3. FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20cm (8 inches) during normal operation. Proposed RF exposure safety information to include in User's Manual.

# 8. Antenna Factor & Cable Loss

| Frequency (MHz) | Antenna Factor (dB) | Cable Loss (dB) | Frequency (MHz) | Antenna Factor (dB) | Cable Loss (dB) |
|---|---|---|---|---|---|
| 30 | 15.35 | 1.00 | 1000 | 24.30 | 3.89 |
| 35 | 13.63 | 1.08 | 2000 | 31.10 | 5.41 |
| 40 | 11.11 | 1.18 | 3000 | 29.60 | 6.92 |
| 45 | 10.59 | 1.24 | 4000 | 30.80 | 8.24 |
| 50 | 6.47 | 1.30 | 5000 | 34.20 | 9.22 |
| 55 | 5.83 | 1.38 | 6000 | 33.30 | 10.25 |
| 60 | 5.18 | 1.44 | 7000 | 37.80 | 11.61 |
| 65 | 4.81 | 1.52 | 8000 | 39.40 | 11.78 |
| 70 | 4.43 | 1.59 | 9000 | 38.40 | 12.59 |
| 75 | 5.10 | 1.68 | 10000 | 38.90 | 13.84 |
| 80 | 5.91 | 1.75 | 11000 | 41.10 | 14.64 |
| 85 | 7.33 | 1.77 | 12000 | 42.70 | 14.12 |
| 90 | 8.74 | 1.83 | 13000 | 43.90 | 16.01 |
| 95 | 9.05 | 1.85 | 14000 | 43.70 | 13.76 |
| 100 | 9.36 | 1.90 | 15000 | 43.40 | 14.30 |
| 110 | 9.65 | 2.01 | 16000 | 40.90 | 15.16 |
| 120 | 9.97 | 2.06 | 17000 | 44.40 | 15.88 |
| 130 | 10.51 | 2.16 | 18000 | 47.10 | 16.09 |
| 140 | 10.32 | 2.24 | 19000 | 37.60 | 16.98 |
| 150 | 9.42 | 2.34 | 20000 | 37.30 | 16.21 |
| 160 | 8.09 | 2.42 | 21000 | 37.00 | 20.13 |
| 170 | 7.43 | 2.56 | 22000 | 38.00 | 19.24 |
| 180 | 7.60 | 2.62 | 23000 | 38.70 | 19.64 |
| 190 | 7.43 | 2.67 | 24000 | 38.60 | 20.54 |
| 200 | 7.26 | 2.76 | 25000 | 38.90 | 20.14 |
| 220 | 9.11 | 2.92 | 14000 | 43.70 | 13.76 |
| 240 | 10.88 | 3.09 | 15000 | 43.40 | 14.30 |
| 260 | 11.75 | 3.23 | 16000 | 40.90 | 15.16 |
| 280 | 11.55 | 3.38 | 17000 | 44.40 | 15.88 |
| 300 | 11.36 | 3.51 | 18000 | 47.10 | 16.09 |
| 320 | 12.03 | 3.63 | 19000 | 37.60 | 16.98 |
| 340 | 12.69 | 3.73 | 20000 | 37.30 | 16.21 |
| 360 | 13.33 | 4.03 | 21000 | 37.00 | 20.13 |
| 380 | 14.00 | 4.00 | 22000 | 38.00 | 19.24 |
| 400 | 14.63 | 4.09 | 23000 | 38.70 | 19.64 |
| 450 | 15.33 | 4.31 | 24000 | 38.60 | 20.54 |
| 500 | 16.03 | 4.64 | 25000 | 38.90 | 20.14 |
| 550 | 16.65 | 5.09 | | | |
| 600 | 17.29 | 5.49 | | | |
| 650 | 17.64 | 5.82 | | | |
| 700 | 18.00 | 5.94 | | | |
| 750 | 18.39 | 6.16 | | | |
| 800 | 18.79 | 6.58 | | | |
| 850 | 19.10 | 6.72 | | | |
| 900 | 19.42 | 6.81 | | | |
| 950 | 19.58 | 7.10 | | | |
| 1000 | 19.75 | 7.41 | | | |

# 9. List of Measuring Equipments Used

| Instrument | Manufacturer | Model No. | Serial No. | Characteristics | Calibration Date | Remark |
|---|---|---|---|---|---|---|
| EMC Receiver | R&S | ESCS 30 | 100132 | 9 KHz – 2.75 GHz | Jun. 03, 2002 | Conduction (CO01-HY) |
| LISN | MessTec | NNB-2/16Z | 2001-008 | 9 KHz – 30 MHz | Apr. 30, 2002 | Conduction (CO01-HY) |
| LISN (Support Unit) | MessTec | NNB-2/16Z | 2001-009 | 9 KHz – 30 MHz | Apr. 30, 2002 | Conduction (CO01-HY) |
| EMI Filter | LINDGREN | LRE-2060 | 1004 | < 450 Hz | N/A | Conduction (CO01-HY) |
| EMI Filter | LINDGREN | N6006 | 201052 | 0 ~ 60 Hz | N/A | Conduction (CO01-HY) |
| 3m Semi Anechoic Chamber | SIDT FRANKONIA | SAC-3M | 03CH03-HY | 30MHz~1GHz 3m | Jun. 22, 2002 | Radiation (03CH03-HY) |
| Spectrum analyzer | R&S | FSP40 | 100004/040 | 9KHZ~40GHz | Aug. 07, 2002 | Radiation (03CH03-HY) |
| Receiver | SCHAFFNER | SCR 3501 | 417 | 9 KHz –1GHz | Feb. 20, 2003 | Radiation (03CH03-HY) |
| Amplifier | HP | 8447D | 2944A09072 | 100KHz – 1.3GHz | Oct. 21, 2002 | Radiation (03CH03-HY) |
| Amplifier | MITEQ | AFS44 | 879981 | 100MHz~26.5GHz | Aug. 12, 2002 | Radiation (03CH03-HY) |
| Bilog Antenna | SCHAFFNER | CBL6112B | 2687 | 30MHz –2GHz | Dec. 21, 2002 | Radiation (03CH03-HY) |
| Horn Antenna | COM-POWER | AH-118 | 10094 | 1GHz – 18GHz | Apr. 10, 2003 | Radiation (03CH03-HY) |
| Turn Table | HD | DS 420 | 420/650/00 | 0 ~ 360 degree | N/A | Radiation (03CH03-HY) |
| Antenna Mast | HD | MA 240 | 240/560/00 | 1 m - 4 m | N/A | Radiation (03CH03-HY) |
| RF Cable-R03m | Jye Bao | RG142 | CB021 | 30MHz~1GHz | Jan. 02, 2003 | Radiation (03CH03-HY) |
| Horn Antenna | Schwarzbeck | BBHA9170 | BBHA9170154 | 15GHz~40GHz | May. 09, 2001 | Radiation (03CH03-HY) |
| RF Cable-HIGH | Jye Bao | RG142 | CB030-HIGH | 1GHz~29.5GHz | Mar. 14, 2003 | Radiation |
| AC power source | HPC | HPA-500W | HPA-9100024 | AC 0~300V | May 22, 2002 | Conducted |
| Temp. and Humidity Chamber | KSON | THS-C3L | 612 | N/A | Oct. 02, 2002 | Conducted |

? Calibration Interval of instruments listed above is one year.

# 10. Uncertainty of Test Site

Uncertainty of Radiated Emission Measurement

| Contribution | Probability Distribution | 3m |
|---|---|---|
| Antenna factor calibration | normal(k=2) | ±1 |
| cable loss calibration | normal(k=2) | ±0.3 |
| RCV/SPA specification | rectangular | ±2 |
| Antenna Directivity | rectangular | ±3 |
| Antenna Factor V.S. Height | rectangular | ±2 |
| Antenna Factor Interpolation for Frequency | rectangular | ±0.25 |
| site imperfection | rectangular | ±2 |
| Mismatch<br>Receiver VSWR Γ1=0.09<br>Antenna VSWR Γ2=0.67<br>Uncertainty=20log(1-Γ1*Γ2) | U-shaped | ±0.54 |
| combined standard uncertainty Ue(y) | normal | ±2.7 |
| Measuring uncertainty for a level of confidence of 95% U=2Ue(y) | normal (k=2) | ±5.4 |

$U=v\{(1/2)^2+(0.3/2)^2+(2^2+0.5^2+2^2+0.25^2+2^2)/3+(0.54)^2/2\}=2.2$ for 10m test distance

$U=v\{(1/2)^2+(0.3/2)^2+(2^2+3^2+2^2+0.25^2+2^2)/3+(0.54)^2/2\}=2.7$ for 3m test distance

Uncertainty of Conducted Emission Measurement

| Contribution | Probability Distribution | 150KHz – 30MHz |
|---|---|---|
| Cable and I/P attenuator calibration | normal(k=2) | ±0.3 |
| RCV/SPA specification | rectangular | ±2 |
| LISN coupling specification | rectangular | ±1.5 |
| Transducer factor frequency interpolation | rectangular | ±0.2 |
| Mismatch<br>Receiver VSWR Γ1=0.09<br>LISN VSWR Γ2=0.33<br>Uncertainty=20log(1-Γ1*Γ2) | U-shaped | 0.2 |
| combined standard uncertainty Ue(y) | normal | ±1.66 |
| Measuring uncertainty for a level of confidence of 95% U=2Ue(y) | normal (k=2) | ±3.32 |

$U=v\{(0.3/2)^2+(2^2+1.5^2+0.2^2)/3+(0.2)^2/2\}=1.66$