

 $Fig107. Conducted\ Transmission\ Spurious\ Emission\ of\ 802.11n-40\ in\ channel\ 6,\ 10GHz\sim15GHz$ 

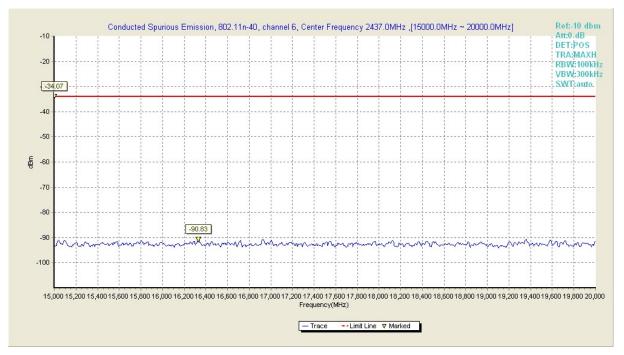
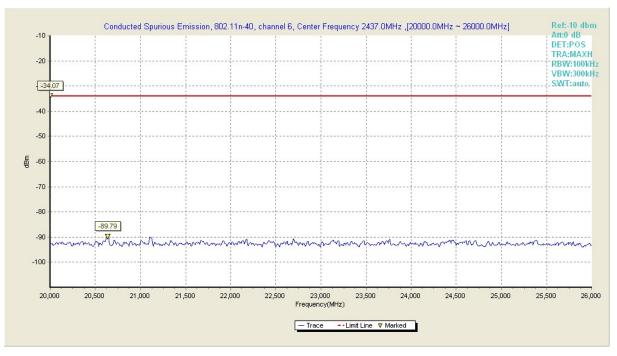


Fig108.Conducted Transmission Spurious Emission of 802.11n-40 in channel 6, 15GHz ~ 20GHz



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Fig109.Conducted Transmission Spurious Emission of 802.11n-40 in channel 6, 20GHz ~ 26GHz

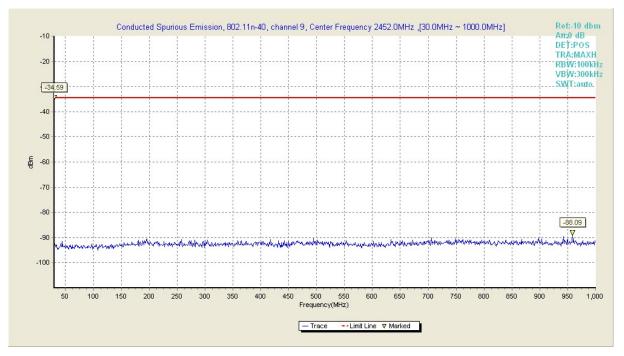
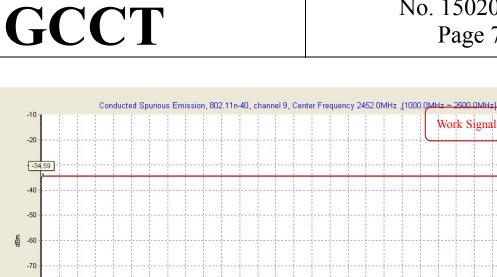


Fig110.Conducted Transmission Spurious Emission of 802.11n-40 in channel 11, 30MHz~1GHz



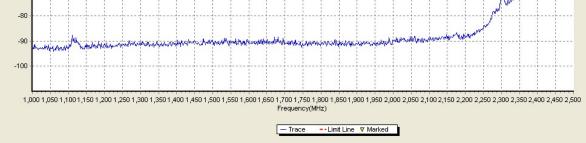


Fig111.Conducted Transmission Spurious Emission of 802.11n-40 in channel 11, 1GHz ~ 2.5GHz

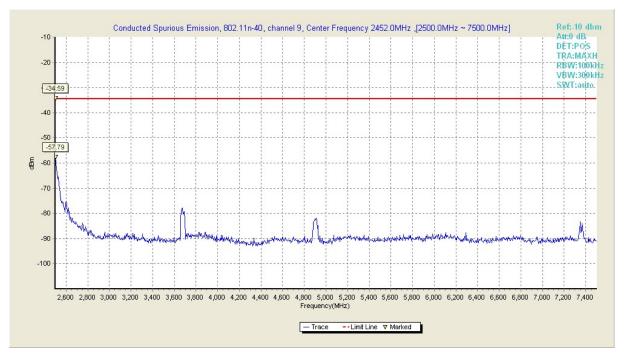


Fig112.Conducted Transmission Spurious Emission of 802.11n-40 in channel 11, 2.5GHz ~ 7.5GHz



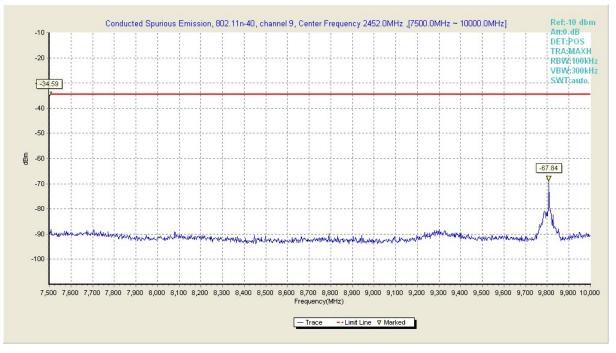


Fig113.Conducted Transmission Spurious Emission of 802.11n-40 in channel 11, 7.5GHz ~ 10GHz

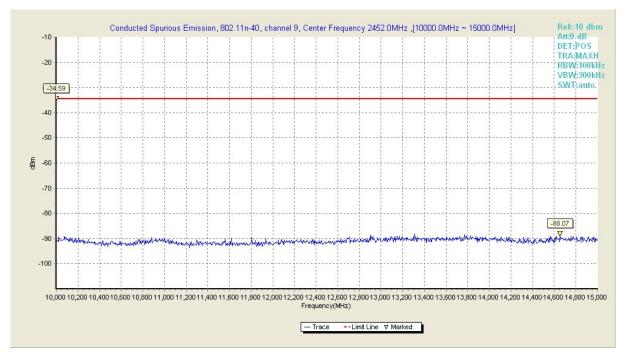


Fig114.Conducted Transmission Spurious Emission of 802.11n-40 in channel 11, 10GHz ~ 15GHz



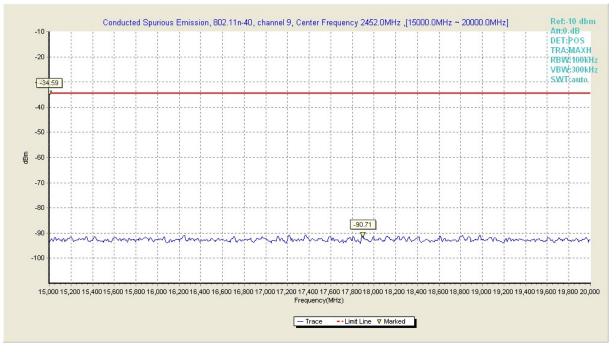


Fig115.Conducted Transmission Spurious Emission of 802.11n-40 in channel 11, 15GHz ~ 20GHz

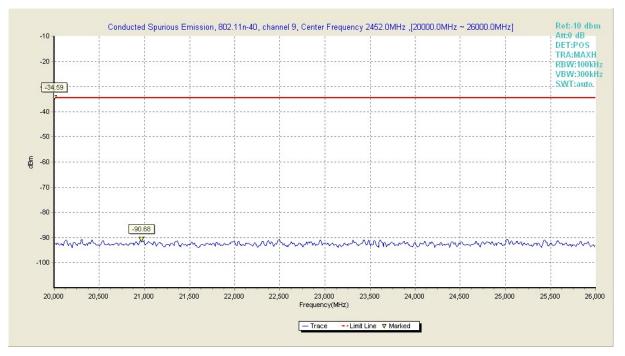


Fig116.Conducted Transmission Spurious Emission of 802.11n-40 in channel 11, 20GHz ~ 26GHz

# **B.6 AC Conducted Emission**

#### **B.6.1 Description**

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits

### **B.6.2 Test Procedure**

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.

2. Connect EUT to the power mains through a line impedance stabilization network (LISN).

3. All the support units are connecting to the other LISN.

4. The LISN provides 50 ohm coupling impedance for the measuring instrument.

5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.

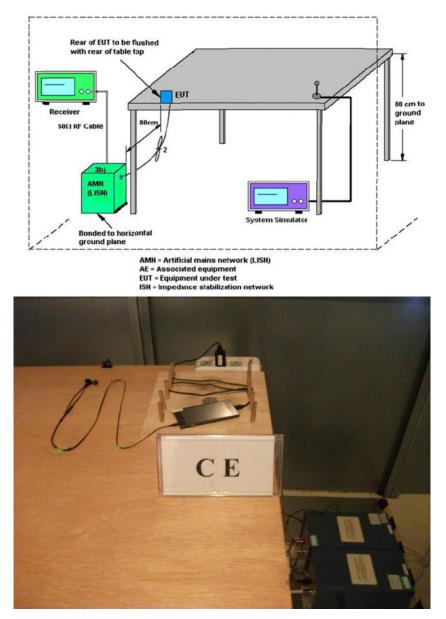
6. Both sides of AC line were checked for maximum conducted interference.

7. The frequency range from 150 kHz to 30 MHz was searched.

8. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold

Mode.

#### **B.6.4 Test Setup**

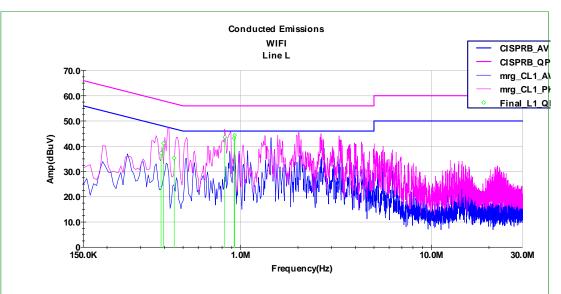


### **B.6.5 Test Results**

#### Limit

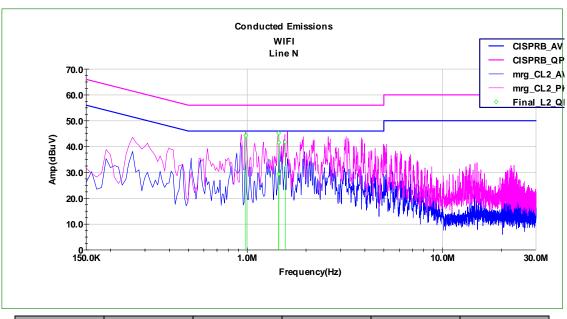
| Frequency of Emission(MHz)                 | Conducted Limit(dBµV) |           |  |
|--|-----------------------|-----------|--|
|  | Quasi –Peak           | Average   |  |
| 0.15-0.5                                   | 66 to 56*             | 56 to 46* |  |
| 0.5-5                                      | 56                    | 46        |  |
| 5-30                                       | 60                    | 50        |  |
| *Decreases with logarithm of the frequency |                       |           |  |

Line L



| Frequency | Limit       | QP     | Frequency | Limit       | AV          |
|-----------|-------------|--------|-----------|-------------|-------------|
| (MHz)     | $dB(\mu V)$ | dB(µV) | (MHz)     | $dB(\mu V)$ | $dB(\mu V)$ |
| 0.383     | 58.20       | 37.30  | 0.383     | 48.20       | 26.36       |
| 0.392     | 57.96       | 41.19  | 0.392     | 47.96       | 27.76       |
| 0.454     | 56.89       | 35.32  | 0.454     | 46.89       | 25.11       |
| 0.832     | 56          | 43.60  | 0.832     | 46          | 32.94       |
| 0.921     | 56          | 43.19  | 0.921     | 46          | 32.16       |
| 0.932     | 56          | 44.34  | 0.932     | 46          | 33.77       |





| Frequency | Limit       | QP          | Frequency | Limit       | AV          |
|-----------|-------------|-------------|-----------|-------------|-------------|
| (MHz)     | $dB(\mu V)$ | $dB(\mu V)$ | (MHz)     | $dB(\mu V)$ | $dB(\mu V)$ |
| 0.984     | 56          | 44.35       | 0.984     | 46          | 35.51       |
| 0.985     | 56          | 44.27       | 0.985     | 46          | 35.36       |
| 1.448     | 56          | 45.24       | 1.448     | 46          | 35.50       |
| 1.449     | 56          | 29.33       | 1.449     | 46          | 27.26       |
| 1.452     | 56          | 41.60       | 1.452     | 46          | 28.89       |
| 1.565     | 56          | 41.78       | 1.565     | 46          | 29.18       |

# **B.7 Radiated Emission**

# **B.7.1 Limit of Radiated Emission**

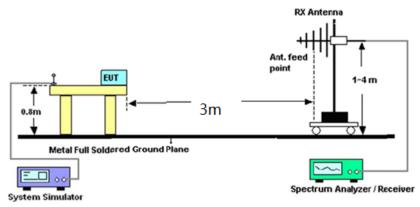
In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20dB below the highest emission level within the authorized band. In addition, radiated emissions which fall in the restricted bands must also comply with the FCC section 15.209 limits as below

| Frequency(MHz) | Field Strength(microvolts/meters) | Measurement Distance(Meters) |
|----------------|-----------------------------------|------------------------------|
| 0.009-0.490    | 2400/F(kHz)                       | 3000                         |
| 0.490-1.705    | 24000/F(kHz)                      | 30                           |
| 1.705-30.0     | 30                                | 30                           |
| 30-88          | 100                               | 3                            |
| 88-216         | 150                               | 3                            |
| 216-960        | 200                               | 3                            |
| above 960      | 500                               | 3                            |

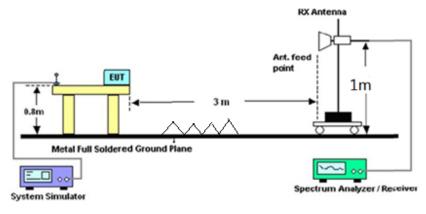
# **B.7.2 Test Setup**

| Frequency Band(MHz) | Function | Resolution Bandwidth | Video Bandwidth |
|---------------------|----------|----------------------|-----------------|
| 30 to 1000          | Peak     | 100kHz               | 100kHz          |
| Above 1000          | Peak     | 1MHz                 | 1MHz            |
|                     | Average  | 1MHz                 | 10Hz            |

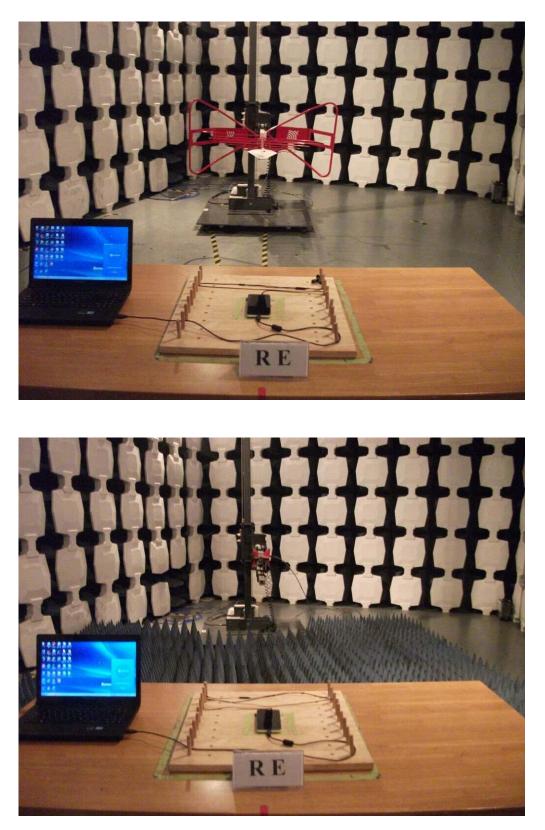
#### **Radiated Emissions Frequency: Below 1GHz**



**Radiated Emissions Frequency: above 1GHz** 





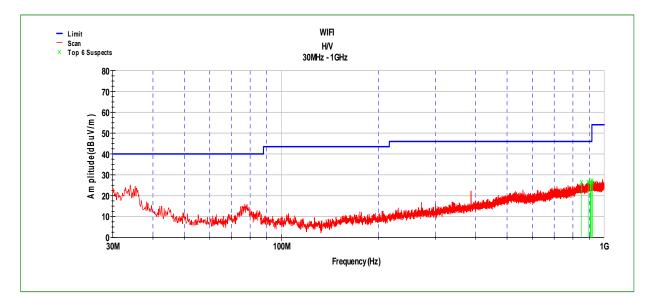


# **B.7.3 Test Results**

The low frequency, which started from 9kHz to 30MHz and the high frequency, which above 6GHz, were pre-scanned and which was 20dB lower than limit line per 15.31(0) were not reported.

Worst case data rate mode: 802.11b Test Mode: Traffic Verdict: Pass

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#### Fig.118 Radiated Emission of channel 1 in 30MHz-1GHz

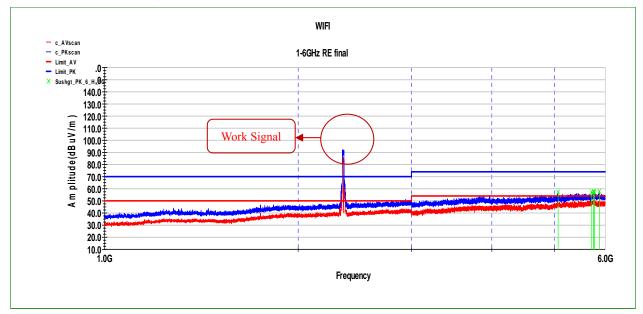


Fig.119 Radiated Emission of channel 1 in 1GHz-6GHz

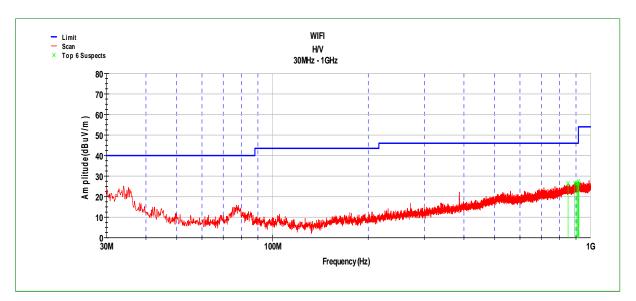


Fig.120 Radiated Emission of channel 6 in 30MHz-1GHz

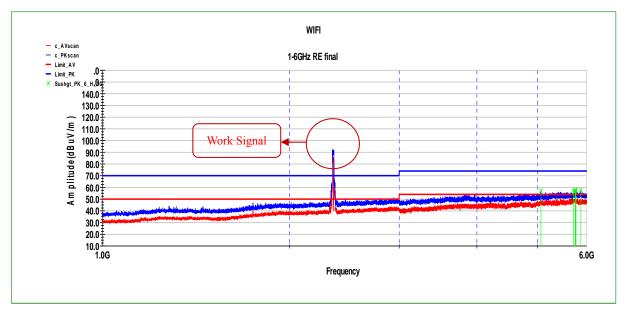


Fig.121 Radiated Emission of channel 6 in 1GHz-6GHz

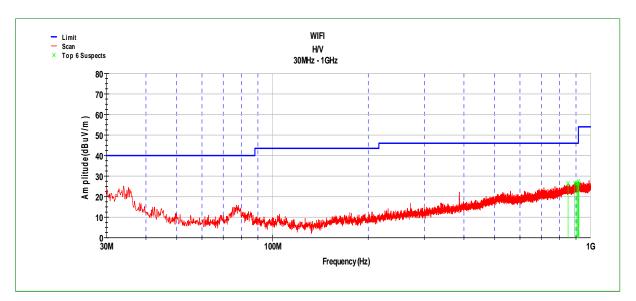


Fig.122 Radiated Emission of channel 11 in 30MHz-1GHz

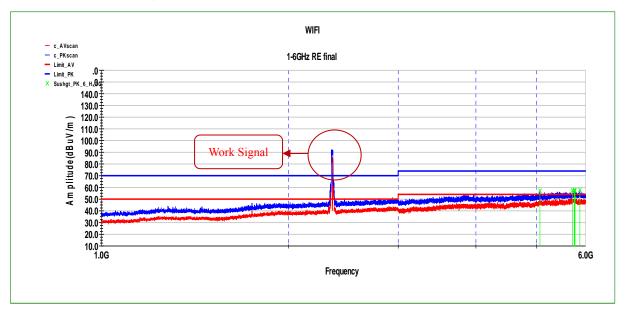


Fig.123 Radiated Emission of channel 11 in 1GHz-6GHz

# **B.8** Antenna Requirements

### **B.8.1 Standard Applicable**

If directional gain of transmitting antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the FCC rule.

# **B.8.2** Antenna Connected construction

The Antenna type used in this product is PIFA Antenna without connector and it is considered to meet antenna requirement.



### **B.8.3** Antenna Gain

The antenna peak gain of EUT is less than 6dBi, Therefore, it is not necessary to reduced maximum peak output power limit.

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