



FCC EMC Test Report

Product Name: WiMAX CPE

Model Number: BM622i

Report No: SYBH(Z-EMC) 049032011-2
FCC ID: QISBM622I

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Notice 1

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2. The laboratory has been listed on the US Federal Communications Commission list of test facilities recognized to perform electromagnetic emissions measurements. The site recognition number is 97456.
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Notice 2

Modification Information:

Modification Information

| | | |
|--------------------------|---|------------------------|
| Modification Information | 1 | |
| | 2 | |
| | 3 | <i>Not Applicable!</i> |
| | 4 | |
| | 5 | |
| | 6 | |
| | 7 | |



| | |
|------------------|---------------------------------|
| REPORT ON | WiMAX CPE |
| | M/N: BM622i |
| REGULATION | FCC CFR47 Part 15: Subpart B; |
| | FCC CFR47 Part 27: Subpart C&M; |
| START OF TEST | Mar.25,2011 |
| END OF TEST | Mar.31,2011 |
| | |
| Final Judgement: | Pass |

Approved By

2011-04-12
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1 Status

1.1 Product Information

| | |
|----------------------------|--|
| CLIENT: | Huawei Technologies Co., Ltd. |
| ADDRESS: | Bantian Longgang District Shenzhen, P.R. China |
| MANUFACTURING DESCRIPTION | WiMAX CPE |
| MANUFACTURERS MODEL NUMBER | BM622i |

1.2 Test Site

Site 1:
EMC LABORATORY OF RELIABILITY LABORATORY OF HUAWEI TECHNOLOGIES CO., LTD

1.3 Test environment condition

| | |
|----------------------|---------|
| Ambient temperature | 20~25°C |
| Relative humidity | 40%~52% |
| Atmospheric pressure | 101kPa |



2 Summary of Results

Table below shows a brief summary of the results obtained.

Summary of results

| EUT Classification: Wireless Terminal | | | | |
|--|---|--------------------------------------|---------------|-------------|
| Test Items | Test Configuration & Test Mode | Required Performance Criteria | Result | Site |
| <u>Radiated Emissions</u> Enclosure Port | TC1 (TM3-TM4) | N/A | Pass | Site1 |
| <u>Conducted Emissions</u> | TC1 (TM1-TM4) | N/A | Pass | Site1 |
| <u>Radiated Spurious Emissions</u> Enclosure Port | TC1 (TM1-TM4) | N/A | Pass | Site1 |

Note:
1, Measurement taken is within the measurement uncertainty of measurement system.
2, TC = Test configuration



3 Equipment Specification

3.1 General Description

HUAWEI BM622i, a WiMAX CPE, is a proprietary product developed by HUAWEI based on IEEE 802.16e-2005, and works in range of 2.496-2.69GHz, The product is composed of three PCB boards, a WiMAX RF board, a home gate board, and an antenna PCB board, providing two ports for the user service.

- 1×RJ45:10/100M LAN port;
- 1×RJ11: TEL port for VOIP;

3.1.1 Main Equipment Technical Data

| | |
|--------------------------|--|
| Description: | WiMAX CPE |
| Models: | BM622i |
| Input Rated Voltage: | 12V |
| Rated Consumption Power: | Max 12 W |
| Rated Power: | Max +25±2 dBm |
| Dimensions: | 128 (length) ×60 (width) ×186 (height) (mm3) |
| Weight: | < 300 g |

Sub-Assembly Identity

| Mode | | Work Frequency | | |
|-------|--------|-------------------|---------------------------|-------------------------|
| | | channel bandwidth | Transmitt Frequency (MHz) | Receive Frequency (MHz) |
| WiMAX | 2.5GHz | 5MHz | 2496 MHz -2690 MHz | 2496 MHz-2690 MHz |
| | | 10MHz | 2496 MHz -2690 MHz | 2496 MHz-2690 MHz |

Sub-Assembly Identity

| Board | | | | |
|---------------|------|------------------|-------------------|---|
| Model Name | Qty. | Hardware Version | Serial Number | Description |
| BM62VLIE | 1 | \ | 020WCQ8W04000035 | Home gate Board |
| BM65WACA | 1 | \ | 020WCQ8W04000035 | WiMAX RF Board |
| BM62ANSL | 1 | \ | NA | Antenna Board |
| Accessory | | | | |
| Name | Qty. | Manufacture | Model | Description |
| AC/DC Adapter | 1 | Shenzhen FuHua | UE24WI-1202002SPA | M/N: UE24WI-1202002SPA Input: AC100-240V, 50/60Hz, 600mA Output: 12V/DC, 2.0A MAX |



4 System Configuration during EMC Test

The Equipment under Test (EUT) was functioning correctly during all tests. The EUT was installed within the test site and was configured to simulate a typical user installation.

4.1 Cables Used during Test

Cable Used during Test

| Cable | Connector | Type of Cable |
|---------------|------------|---------------|
| AC Power Port | Power Jack | Unshielded |
| LAN | RJ45 | Unshielded |
| TEL | RJ11 | Unshielded |

4.2 Associated Equipment Used during Test

Associated Equipment Used during Test

| Name | Model | Manufacturer | S/N | Cal Date |
|---|--------|--------------|------------|-----------|
| Personal Computer | T61 | IBM | 3108052581 | / |
| Personal Computer | D620 | DELL | 3106085412 | / |
| Telephone | 37 | TCL | / | / |
| Mobile WiMAX Test Set(Base Station simulator) | E6651A | Agilent | MY48150125 | 2010-8-10 |

4.3 Test Configurations and Test Mode

4.3.1 Test Configuration.

The EUT will be connected to test system (Base Station Simulator) in order to simulate normal operating conditions (with reference to the guidance given in the standard for this type of equipment).

TC1:EUT powered with an adapter and connected to the test system (Base Station Simulator).

Configuration table

| | |
|-----|---------|
| TC1 | TM1~TM4 |
|-----|---------|

4.3.2 Test Mode

There were 10 test Modes. TM1 to TM10 were shown in the diagrams below:

| | |
|-----|---------------------------------------|
| TM1 | operate in traffic mode WIMAX (5MHz) |
| TM2 | operate in traffic mode WIMAX (10MHz) |
| TM3 | operate in idle WIMAX (5MHz) |
| TM4 | operate in idle WIMAX (10MHz) |

The EUT will be connected to test system (Base Station Simulator) in order to simulate normal operating conditions (with reference to the guidance given in the standard for this type of equipment).

4.4 Test conditions and test Connections

4.4.1 Test Conditions

The EUT was connected to a WiMAX base station or base station simulator like Agilent E6651A mobile WiMAX test set in order to simulate normal operating condition with reference to the guidance given in the standard for this type of equipment.

4.4.2 Test connections

Electromagnetic Interference Test

Emission test:

During Emission test, there was established a communication link using one way RF antenna and one LAN port. The remained RF input and output ports were terminated with 50Ω load.

The WiMAX antenna port transmits with full power of +25dBm (conduct). The Channel frequency was set to uniform distribution in the TX band, the test channel is:

| Channel power. | Channel Frequency |
|----------------|-------------------|
| +25dBm | 2500MHz |

Immunity Test:

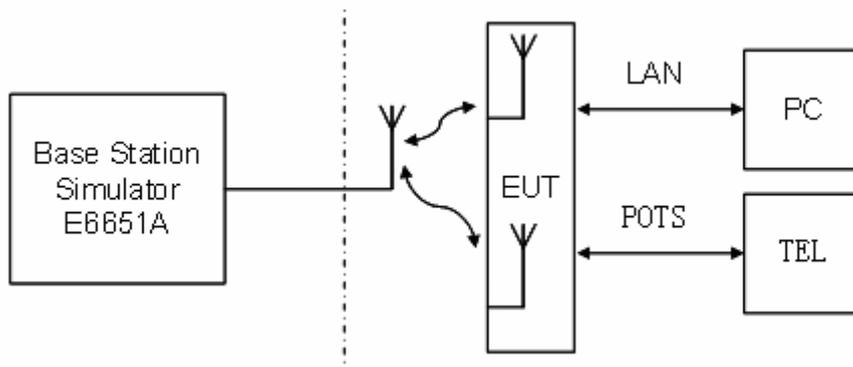
During immunity test, the wanted input signal level shall be set to a level where the performance is not limited by the receiver noise floor or strong signal affects (15 dB above the reference sensitivity level in current test), to provide a stable communication link. Here the outputs signal power of base station emulator is -80dBm.

In order to assess the BER of the bearer used during the immunity tests, there had established a data connection between the E6651A and the PC; on the E6651A's display we can read the BER of the communication immediacy.

The EUT will be connected to the base station emulator like Agilent E6651A Mobile WiMAX Test set in order to simulate normal operating conditions with reference to the guidance given in the standard for this type of equipment.

The EUT will be connected to test system (Base Station Simulator) in order to simulate normal operating conditions (with reference to the guidance given in the standard for this type of equipment).

A communication link shall be set up with the WiMAX base station system or a WiMAX base station simulator like the Agilent E6651A. The E6651A calculates BER immediacy on the display. The test connection is shown as below:





5 Electromagnetic Interference (EMI)

5.1 Radiated Disturbance 30MHz to 18GHz

5.1.1 Test Procedure

The test site semi-anechoic chamber has met the requirement of NSA tolerance 4dB according to the standards: ANSI C63.4. The test distance was 3m. The set-up and test methods were according to ANSI C63.4.

A preliminary scan and a final scan of the emissions were made from 30 MHz to 18 GHz by using test script of software; the emissions were measured using Quasi-Peak Detector (30MHz~1GHz) and AV detector (above 1GHz). The maximal emission value was acquired by adjusting the antenna height, polarisation and turntable azimuth in accordance with the software setup. Normally, the height range of antenna was 1m to 4m, the azimuth range of turntable was 0° to 360°, The receive antenna has two polarizations V and H.

EUT was configured in idle mode and the test performed at worst emission state.

Measurement bandwidth: 30 MHz – 1000 MHz: 120 k Hz

Measurement bandwidth: 1GHz – 18GHz: 1MHz

Test set up figure:

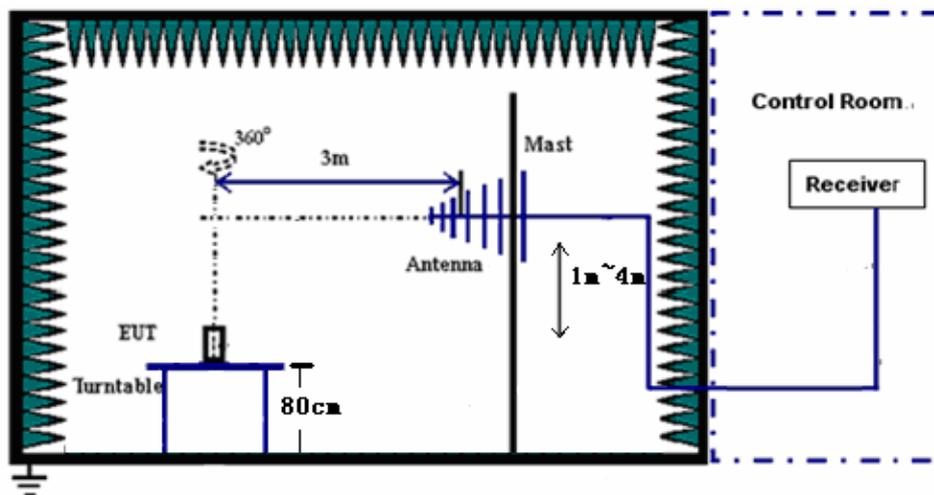


Figure 1. Test set-up

5.1.2 Test Results

The EUT has met the requirements for Radiated Emission of enclosure port.

Test Limits

| Frequency of Emission (MHz) | Radiated Limit | |
|-----------------------------|--------------------------------|---|
| | Unit($\mu\text{V}/\text{m}$) | Unit($\text{dB}\mu\text{V}/\text{m}$) |
| 30-88 | 100 | 40 |
| 88-216 | 150 | 43.5 |
| 216-960 | 200 | 46 |
| Above 960 | 500 | 54 |



5.2 Conducted Disturbance 0.15 MHz to 30MHz

5.2.1 Test Procedure

The Table-top EUT was placed upon a non-metallic table 0.8 m above the horizontal metal reference ground plane. EUT was connected to LISN and LISN was connected to reference Ground Plane. EUT was 80cm from LISN. The set-up and test methods were according to ANSI C63.4.

Conducted Disturbance at AC Port measurements were undertaken on the L and N Lines. The emissions were measured using a Quasi-Peak Detector and Average Detector.

Huawei Mobile Station was communicated with the BTS simulator through Air interface, the BTS simulator controls the Mobile Station to transmitter the maximum power which defined in specification of product. The Mobile Station operated on the typical channel.

Measurement bandwidth (RBW) for 150kHz to 30 MHz: 9 kHz;

Test Set-up figure:

The Mobile Station was setup in the screened chamber and operated under nominal conditions.

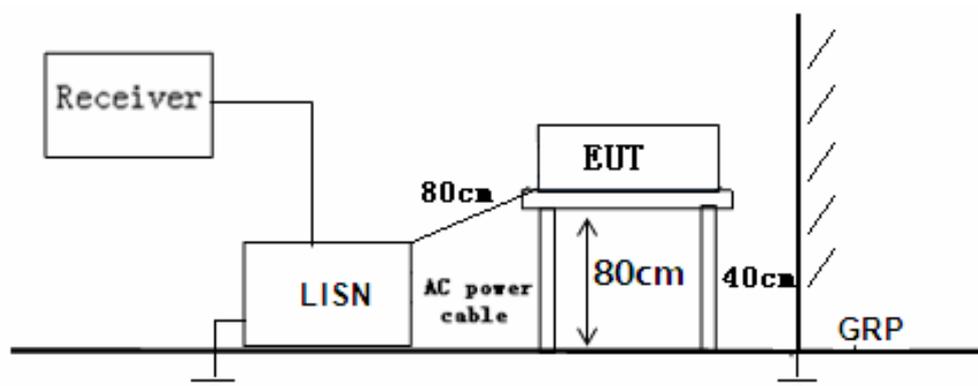


Figure 2. Test Set-up

5.2.2 Test Results

The EUT has met requirements for Conducted disturbance of power lines.

Test Limit of DC&AC Power Port

| Frequency range | 150kHz~ 30MHz | |
|-----------------|------------------|------------------|
| Classification | Class B | |
| Limit(Class B) | Voltage limits | |
| | QP | AV |
| 0.15MHz~0.5MHz | 66~56 dB μ V | 56~46 dB μ V |
| 0.5MHz~5MHz | 56 dB μ V | 46 dB μ V |
| 5MHz~30MHz | 60 dB μ V | 50 dB μ V |

5.3 Radiated Spurious Emissions

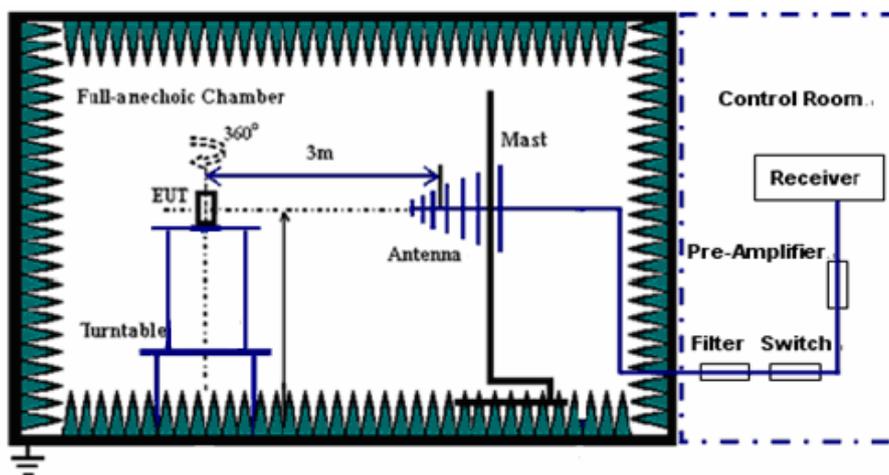
5.3.1 Test Procedure

A test site fulfilling the requirements of ITU-R Recommendation SM329-10 was used. The EUT was placed on a non-conducting support in the anechoic chamber and was operated from a power source via an RF filter to avoid radiation from the power leads.

Step 1:

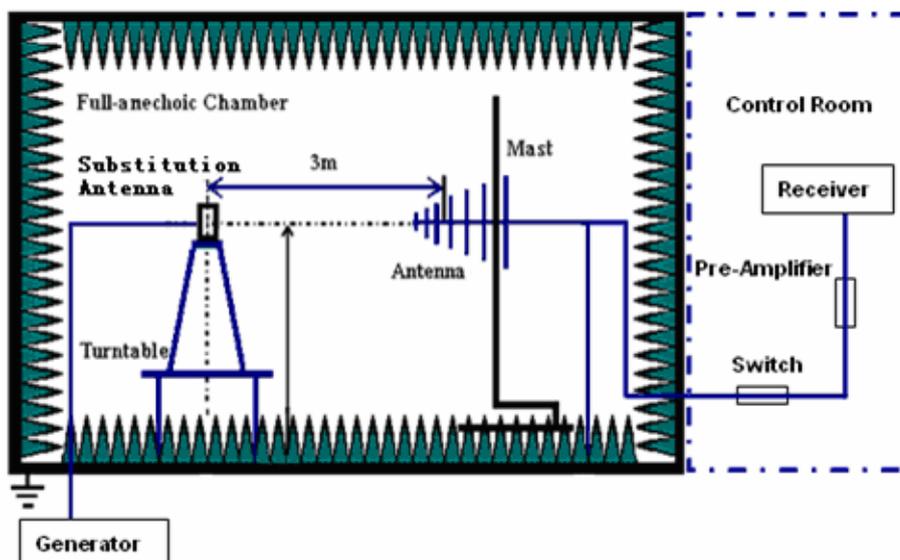
For transmitters other than single sideband, independent sideband and controlled carrier radiotelephone, EIRP shall be measured when the transmitter is adjusted in accordance with the tune-up procedure to give the values of current and voltage on the circuit elements specified in 2.1033(c)(8). Connect the EUT to the BTS simulator via the air interface.

Test the Radiated maximum output power by the Test Receiver from test antenna.



Step 2:

Use substitution method to verify the maximum output power. The EUT is substituted by a dipole antenna. The dipole is connected to a signal generator. And then adjust the output level of the signal generator to get the same received power recorded in step1 on Test Receiver, and record the power level of Signal Generator. Of course, the cable loss at the test frequency should be compensated.





Test should be performed in normal voltage condition.

According to part 27.53(m), the defined measurement bandwidth as following:

27.53(m) Measurement procedure: Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1MHz or greater.

Measurement bandwidth (RBW) for 9 kHz up to 150 kHz: 1 kHz;
Measurement bandwidth (RBW) for 150 kHz up to 30 MHz: 10 kHz;
Measurement bandwidth (RBW) for 30MHz up to 26.5GHz: 1MHz;

Radiated Spurious Emissions Limits

| Frequency band | Minimum requirement (E.R.P) traffic mode |
|----------------|--|
| 9KHz~26.5GHz | -25dBm |

Substitution Results

Channel Bandwidth=5MHz

| Freq. [MHz] | Measurement Value [dBm] | Substitution Antenna Type | Gain [dBd] | Cable Loss [dB] | Signal Generator Level [dBm] | Substitution Level [dBm] | FCC limit [dBm] | Result |
|-------------|-------------------------|---------------------------|------------|-----------------|------------------------------|--------------------------|-----------------|--------|
| 368.885667 | -10.0 | VULB9163 | 3.4 | 1.2 | -30.2 | -27.9 | -25 | Pass |
| 5370.000000 | -15.8 | HF906 | 9.1 | 3.2 | -41.7 | -35.8 | -25 | Pass |
| 8052.000000 | -9.3 | HF906 | 10.3 | 6.0 | -35.4 | -31.1 | -25 | Pass |
| 10743.00000 | -7.1 | HF906 | 9.8 | 6.2 | -36.0 | -32.4 | -25 | Pass |

Channel Bandwidth=10MHz

| Freq. [MHz] | Measurement Value [dBm] | Substitution Antenna Type | Gain [dBd] | Cable Loss [dB] | Signal Generator Level [dBm] | Substitution Level [dBm] | FCC limit [dBm] | Result |
|-------------|-------------------------|---------------------------|------------|-----------------|------------------------------|--------------------------|-----------------|--------|
| 367.915667 | -14.6 | VULB9163 | 3.4 | 1.2 | -34.7 | -32.5 | -25 | Pass |
| 5370.000000 | -20.9 | HF906 | 9.1 | 3.2 | -46.2 | -40.3 | -25 | Pass |
| 8055.000000 | -13.4 | HF906 | 10.3 | 6.0 | -39.6 | -35.3 | -25 | Pass |
| 10749.00000 | -9.1 | HF906 | 9.8 | 6.2 | -38.1 | -34.5 | -25 | Pass |

Note: For get the E.R.P. (Efficient Radiated Power) in substitution method, the following formula should take to calculate it,

$$E.R.P. [dBm] = SGP [dBm] - Cable Loss [dB] + Gain [dBd]$$

NOTE: SGP- Signal Generator Level

5.3.2 Test Results

The EUT has met the requirements of FCC Part27.



6 Main Test Instruments

Main Test Equipments

| Test item | Test Instrument | Model | Manufacturer | Cal-Date | Cal Interval (month) |
|-----------|-------------------|-----------|--------------|--------------|----------------------|
| RE&CE | EMI Test receiver | ESU26 | R&S | Jun.25, 2010 | 12 |
| | Broadband Antenna | VULB 9163 | SCHWARZBECK | May.15, 2010 | 12 |
| | Horn Antenna | HF906 | R&S | May.15, 2010 | 12 |
| | LISN | ENV216 | R&S | Jun.25.2010 | 12 |
| RSE | EMI Test receiver | FSU43 | R&S | Jun.24, 2010 | 12 |
| | Broadband Antenna | VULB 9163 | SCHAFFNER | Sep.21, 2010 | 12 |
| | Horn Antenna | HF906 | R&S | Jun.29, 2010 | 12 |
| | Horn Antenna | 3160 | ETS-Lindgren | Sep.29.2010 | 12 |

Software Information

| Test Item | Software Name | Manufacturer | Version |
|-----------|---------------|--------------|----------|
| RE/CE | ES-K1 | R&S | V1.7.1 |
| RSE | EMC32 | R&S | V8.10.10 |

7 System Measurement Uncertainty

For a 95% confidence level, the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO 17025 were:

System Measurement Uncertainty

| Items | | Extended Uncertainty |
|-------|----------------------------------|--------------------------|
| RE | Field strength (dB μ V/m) | U=4.1dB; k=2(30MHz-1GHz) |
| RE | Field strength (dB μ V/m) | U=4.1dB; k=2(1GHz-18GHz) |
| RSE | ERP (dBm) | U=2.8dB; k=2 |
| CE | Disturbance Voltage (dB μ V) | U=3.4dB; k=2 |

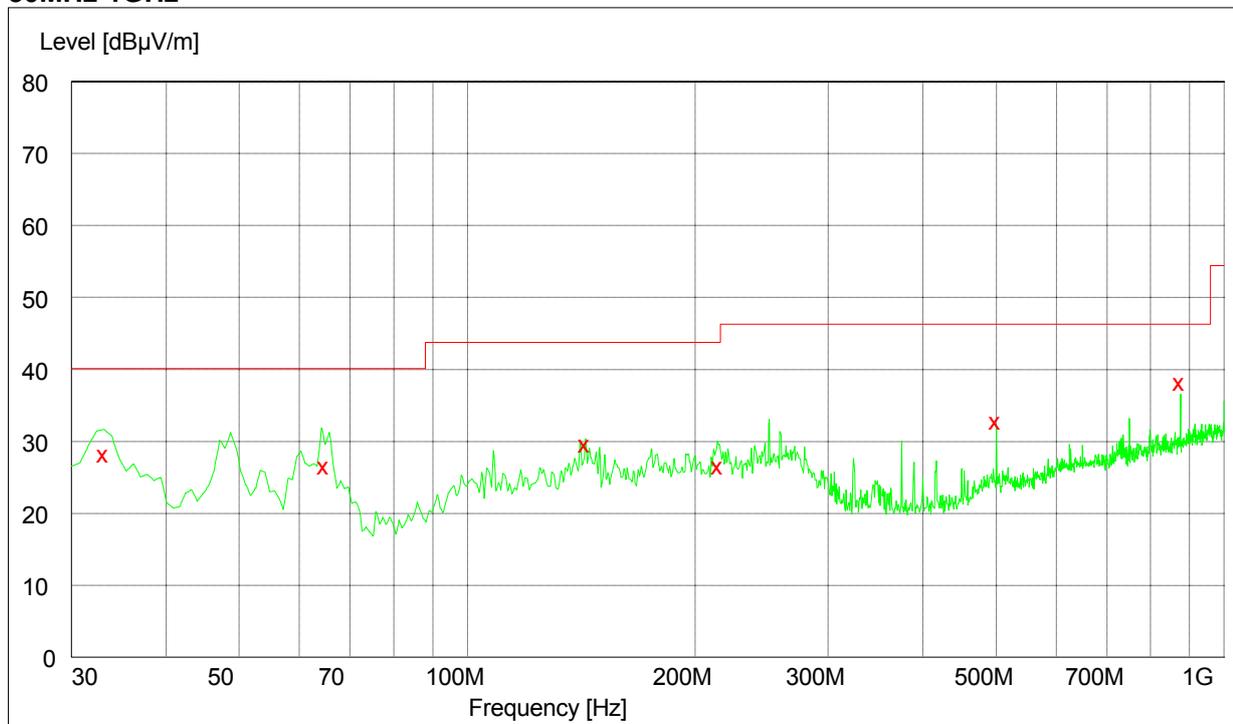


8 Graph and Data of Emission Test

8.1 Radiated Disturbance

This test was carried out in all the test modes, here only the worst test result was shown.

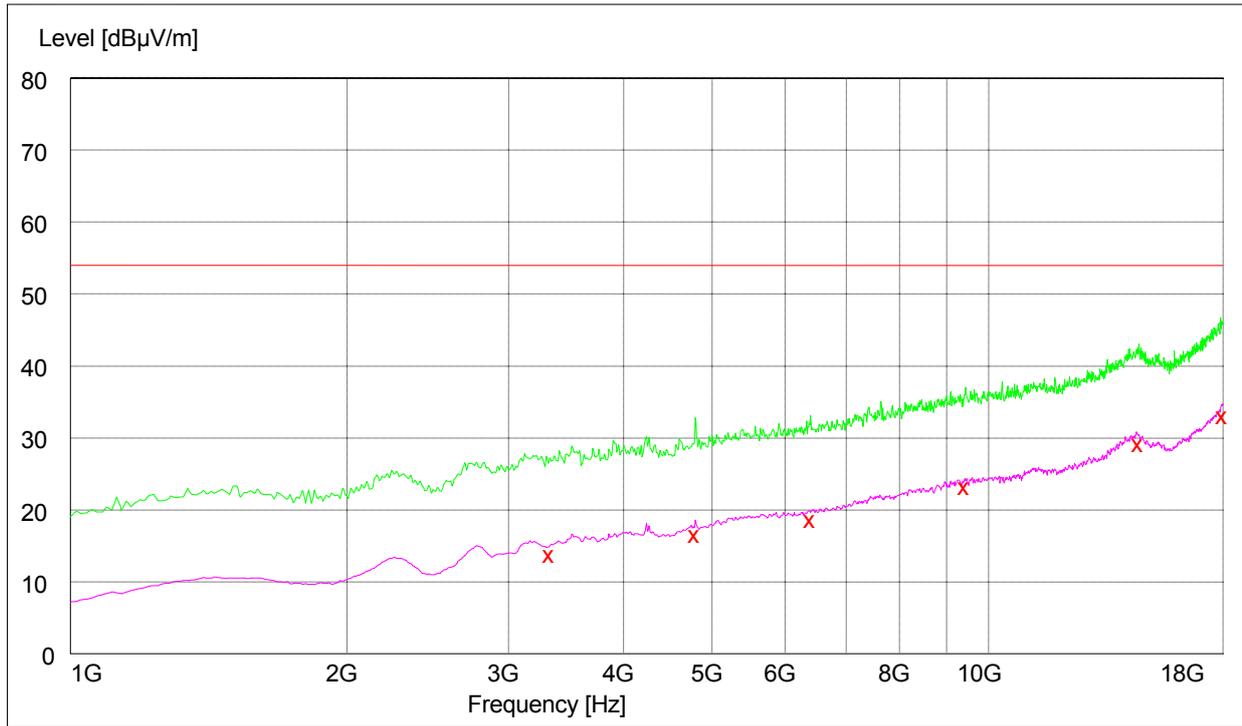
30MHz-1GHz



MEASUREMENT RESULT: QP Detector

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Height cm | Azimuth deg | Polarisation |
|---------------|--------------|-----------|--------------|-----------|-----------|-------------|--------------|
| 33.164000 | 28.50 | 11.7 | 40.0 | 11.5 | 108.0 | 65.00 | VERTICAL |
| 64.804000 | 26.90 | 10.5 | 40.0 | 13.1 | 100.0 | 103.00 | VERTICAL |
| 143.296000 | 29.90 | 8.8 | 40.0 | 10.1 | 100.0 | 80.00 | VERTICAL |
| 214.752000 | 26.90 | 12.7 | 40.0 | 13.1 | 112.0 | 269.00 | HORIZONTAL |
| 500.016000 | 33.10 | 20.2 | 47.0 | 13.9 | 100.0 | 131.00 | HORIZONTAL |
| 875.000000 | 38.40 | 25.9 | 47.0 | 8.6 | 108.0 | 6.00 | HORIZONTAL |

1GHz-18GHz



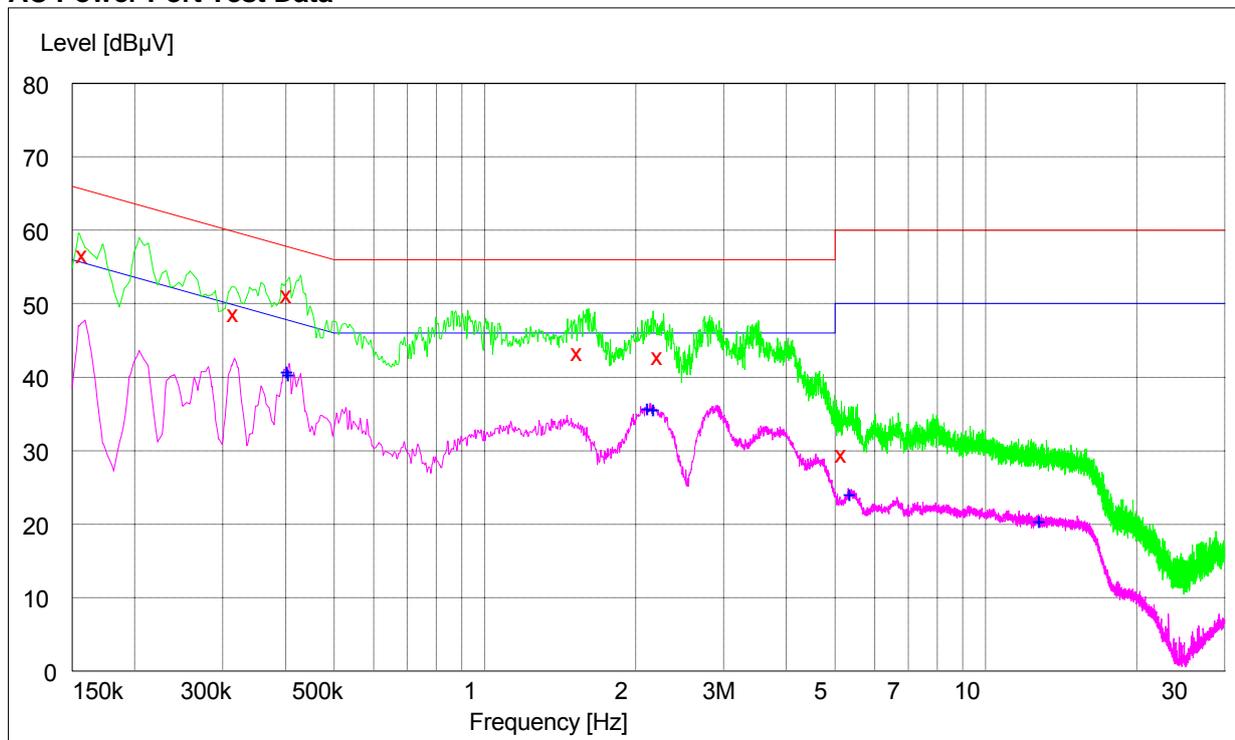
MEASUREMENT RESULT: AV Detector

| Frequency MHz | Level dBµV/m | Transd dB | Limit dBµV/m | Margin dB | Height cm | Azimuth deg | Polarisation |
|---------------|--------------|-----------|--------------|-----------|-----------|-------------|--------------|
| 3325.600000 | 14.10 | -7.9 | 54.0 | 39.9 | 100.0 | 19.00 | VERTICAL |
| 4792.400000 | 16.90 | -4.1 | 54.0 | 37.1 | 178.0 | 309.00 | VERTICAL |
| 6406.700000 | 18.90 | -1.1 | 54.0 | 35.1 | 100.0 | 42.00 | VERTICAL |
| 9428.000000 | 23.50 | 4.8 | 54.0 | 30.5 | 120.0 | 94.00 | VERTICAL |
| 14568.800000 | 29.50 | 12.2 | 54.0 | 24.5 | 173.0 | 0.00 | HORIZONTAL |
| 17995.500000 | 33.40 | 17.3 | 54.0 | 20.6 | 129.0 | 267.00 | HORIZONTAL |

8.2 Conducted Disturbance

This test was carried out in all the test modes, here only the worst test result was shown.

AC Power Port Test Data



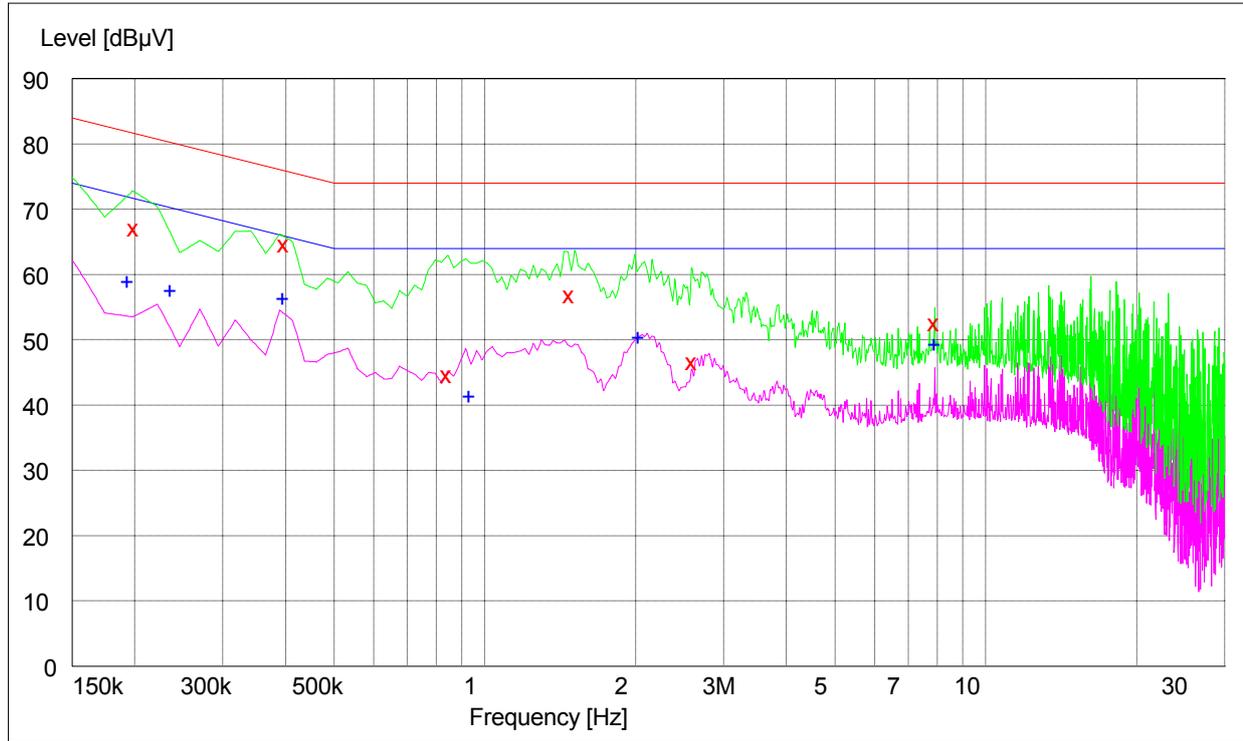
MEASUREMENT RESULT: QP Detector

| Frequency MHz | Level dBµV | Transd dB | Limit dBµV | Margin dB | Line | PE |
|---------------|------------|-----------|------------|-----------|------|-----|
| 0.158000 | 56.80 | 10.1 | 66 | 9.2 | L1 | FLO |
| 0.316000 | 48.80 | 10.0 | 60 | 11.2 | L1 | FLO |
| 0.404000 | 51.40 | 10.0 | 58 | 6.6 | L1 | FLO |
| 1.536000 | 43.60 | 10.1 | 56 | 12.4 | L1 | FLO |
| 2.226000 | 43.00 | 10.1 | 56 | 13 | L1 | FLO |
| 5.176000 | 29.80 | 10.2 | 60 | 30.2 | N | FLO |

MEASUREMENT RESULT: AV Detector

| Frequency MHz | Level dBµV | Transd dB | Limit dBµV | Margin dB | Line | PE |
|---------------|------------|-----------|------------|-----------|------|-----|
| 0.404000 | 40.90 | 10.0 | 48 | 7.1 | L1 | FLO |
| 0.406000 | 40.50 | 10.0 | 48 | 7.5 | L1 | FLO |
| 2.118000 | 35.80 | 10.1 | 46 | 10.2 | L1 | FLO |
| 2.178000 | 35.70 | 10.1 | 46 | 10.3 | L1 | FLO |
| 5.376000 | 24.20 | 10.2 | 50 | 25.8 | N | FLO |
| 12.850000 | 20.50 | 10.3 | 50 | 29.5 | N | FLO |

LAN Port Test Data



Measurement Result of Conducted Disturbance on LAN Port (QP Detector)

| Frequency MHz | Level dBµV | Transd dB | Limit dBµV | Margin dB | Line | PE |
|---------------|------------|-----------|------------|-----------|------|-----|
| 0.200000 | 67.40 | 10.1 | 82 | 14.6 | --- | --- |
| 0.398000 | 64.90 | 10.0 | 76 | 11.1 | --- | --- |
| 0.842000 | 44.80 | 10.0 | 74 | 29.2 | --- | --- |
| 1.478000 | 57.10 | 10.1 | 74 | 16.9 | --- | --- |
| 2.600000 | 46.90 | 10.1 | 74 | 27.1 | --- | --- |
| 7.922000 | 52.90 | 10.2 | 74 | 21.1 | --- | --- |

Measurement Result of Conducted Disturbance on LAN Port (AV Detector)

| Frequency MHz | Level dBµV | Transd dB | Limit dBµV | Margin dB | Line | PE |
|---------------|------------|-----------|------------|-----------|------|-----|
| 0.194000 | 59.10 | 10.1 | 72 | 12.9 | --- | --- |
| 0.236000 | 57.60 | 10.0 | 70 | 12.4 | --- | --- |
| 0.396000 | 56.40 | 10.0 | 66 | 9.6 | --- | --- |
| 0.932000 | 41.60 | 10.1 | 64 | 22.4 | --- | --- |
| 2.032000 | 50.60 | 10.1 | 64 | 13.4 | --- | --- |
| 7.922000 | 49.40 | 10.2 | 64 | 14.6 | --- | --- |

TEL Port Test Data

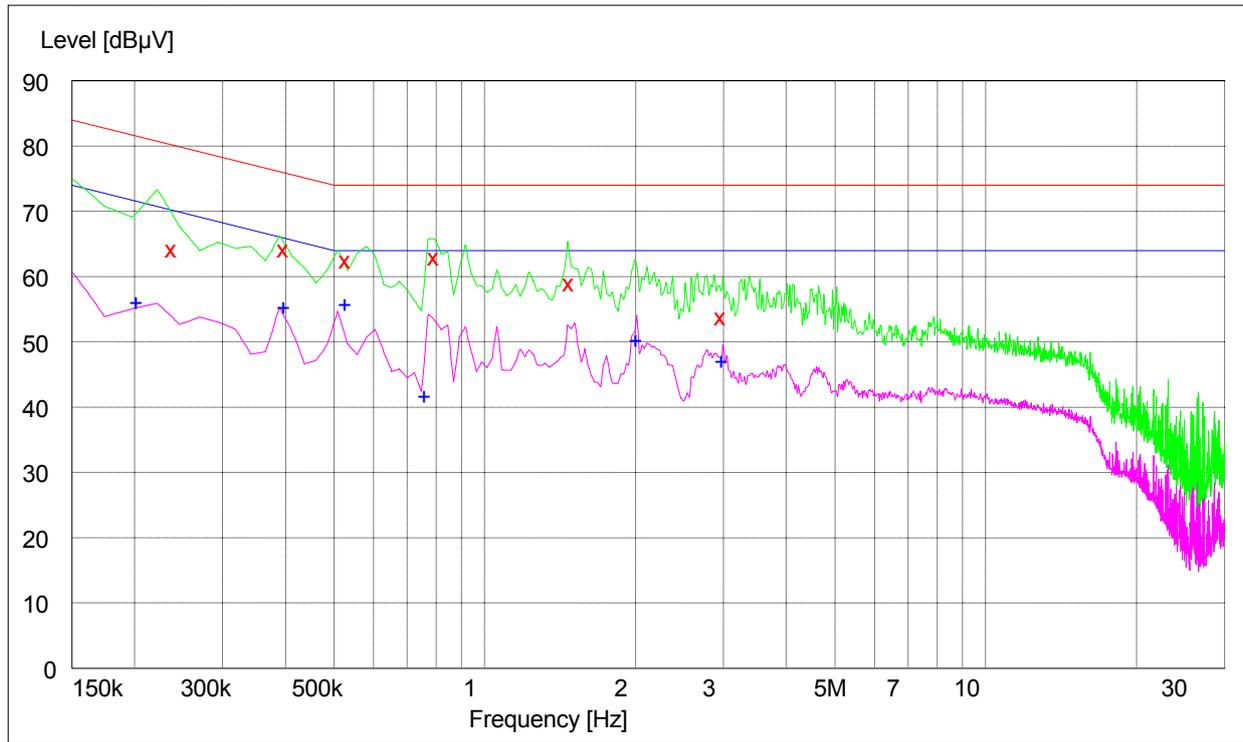


Table 1: Measurement Result of Conducted Disturbance on TEL Port (QP Detector)

| Frequency MHz | Level dBµV | Transd dB | Limit dBµV | Margin dB | Line | PE |
|---------------|------------|-----------|------------|-----------|------|-----|
| 0.238000 | 64.40 | 10.0 | 80 | 15.6 | --- | --- |
| 0.398000 | 64.40 | 10.0 | 76 | 11.6 | --- | --- |
| 0.530000 | 62.70 | 10.0 | 74 | 11.3 | --- | --- |
| 0.796000 | 63.30 | 10.0 | 74 | 10.7 | --- | --- |
| 1.478000 | 59.30 | 10.1 | 74 | 14.7 | --- | --- |
| 2.970000 | 54.00 | 10.1 | 74 | 20 | --- | --- |

Table 2: Measurement Result of Conducted Disturbance on TEL Port (AV Detector)

| Frequency MHz | Level dBµV | Transd dB | Limit dBµV | Margin dB | Line | PE |
|---------------|------------|-----------|------------|-----------|------|-----|
| 0.202000 | 56.20 | 10.1 | 72 | 15.8 | --- | --- |
| 0.398000 | 55.50 | 10.0 | 66 | 10.5 | --- | --- |
| 0.528000 | 55.80 | 10.0 | 64 | 8.2 | --- | --- |
| 0.760000 | 41.90 | 10.0 | 64 | 22.1 | --- | --- |
| 2.010000 | 50.40 | 10.1 | 64 | 13.6 | --- | --- |
| 2.982000 | 47.20 | 10.1 | 64 | 16.8 | --- | --- |

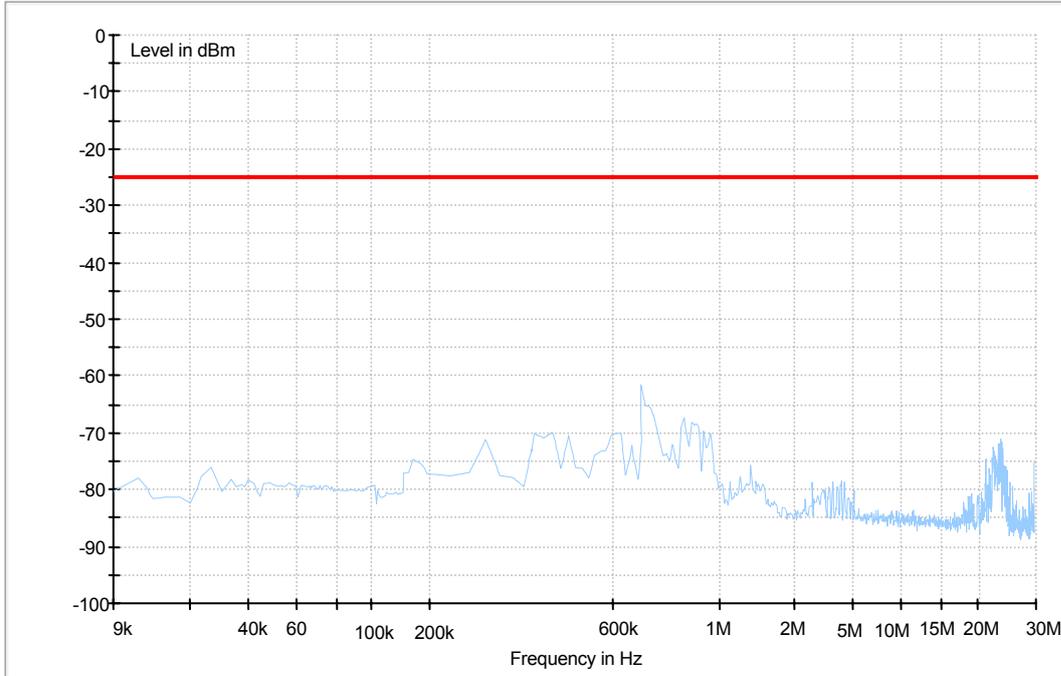


8.3 Radiated Spurious Emission

This test results are the maximum level of radiated spurious emissions in vertical and horizontal polarity. The highest peak exceeds the limit line is carrier frequency

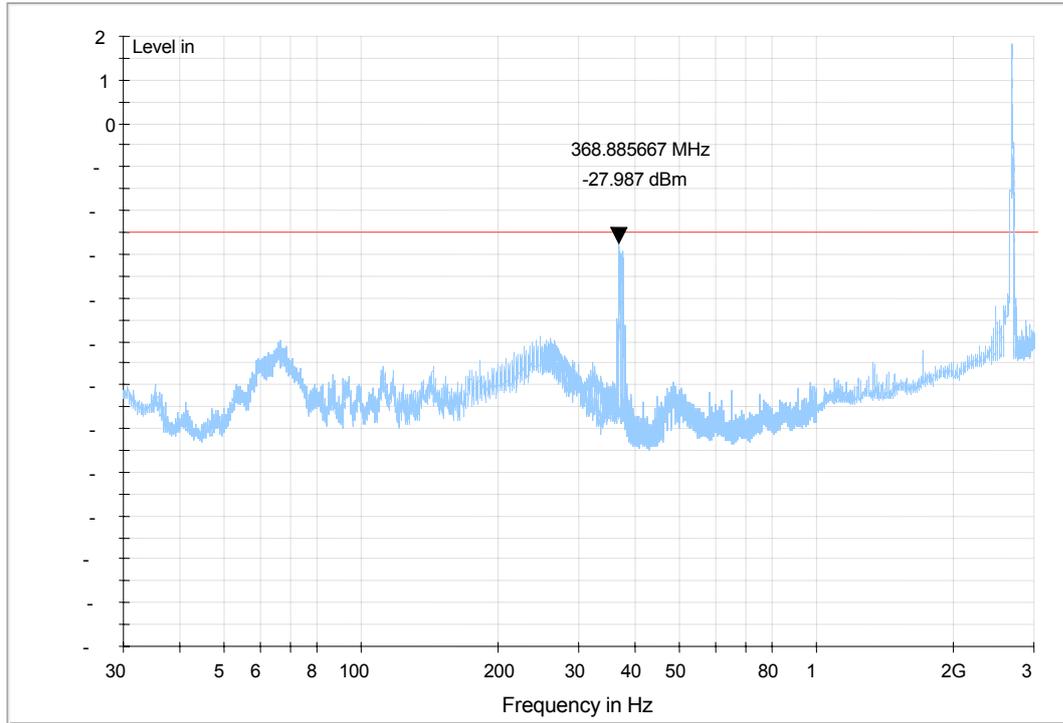
8.3.1 For WIMAX 2.5G (Channel Bandwidth=5MHz)

Traffic Mode (9kHz-30MHz)



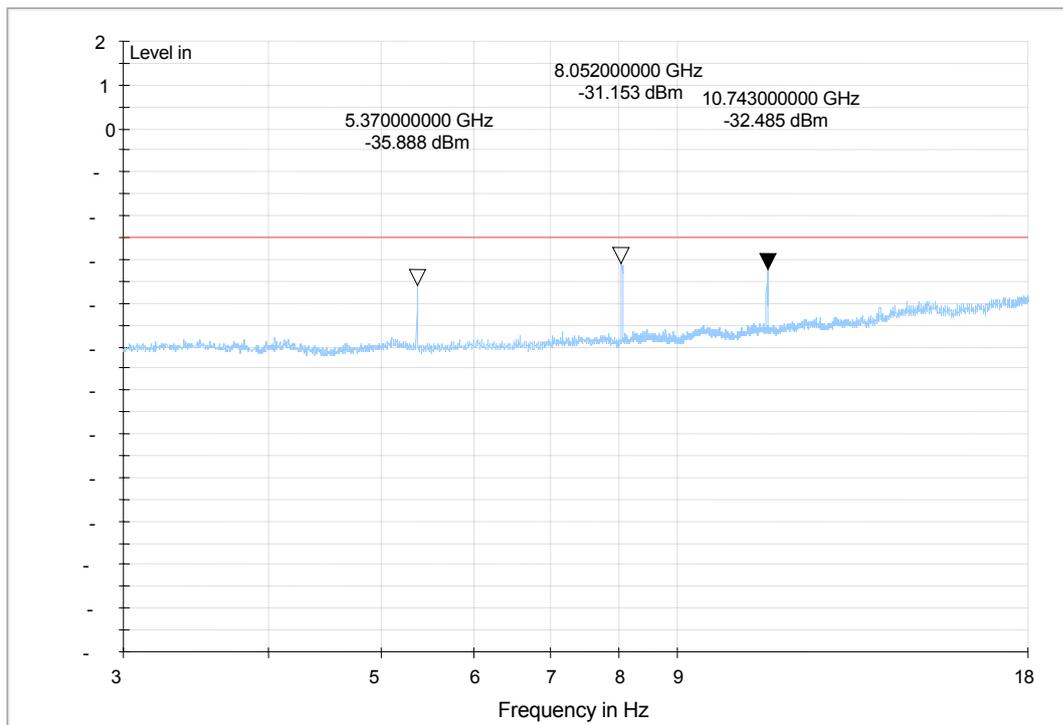


Traffic Mode (30MHz-3GHz)

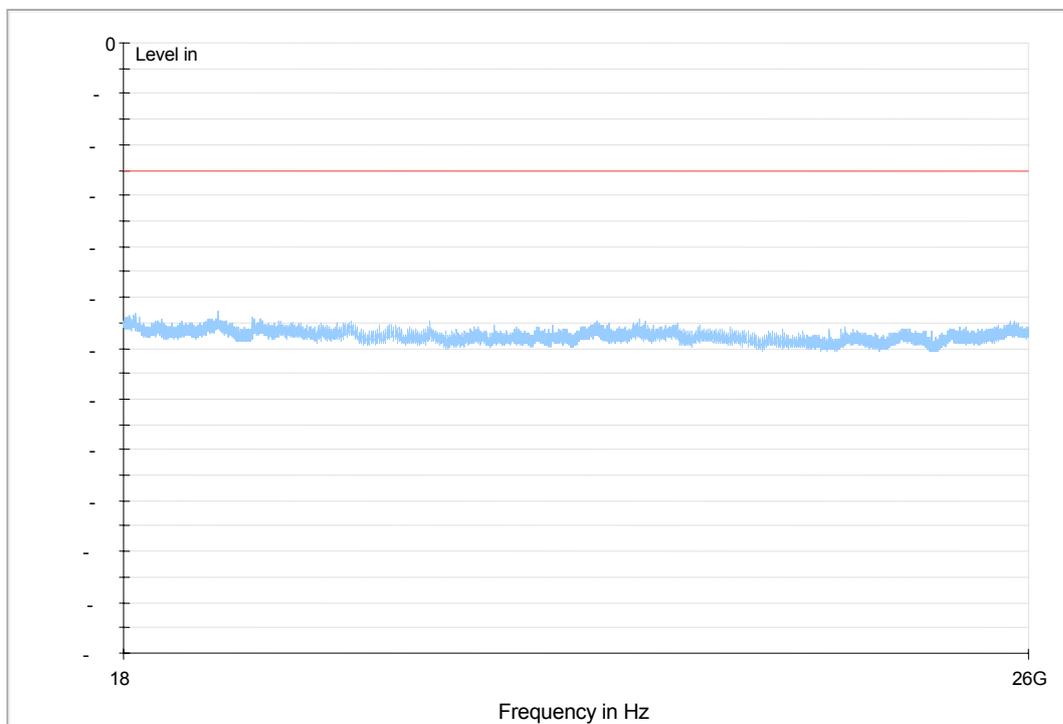




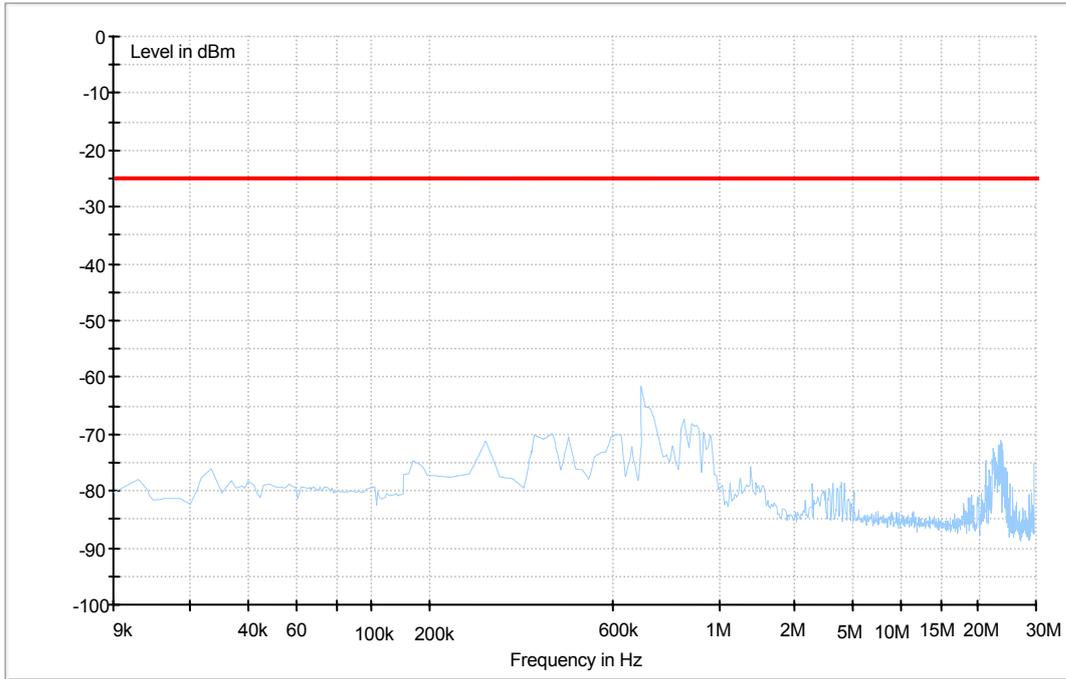
Traffic Mode (3GHz-18GHz)



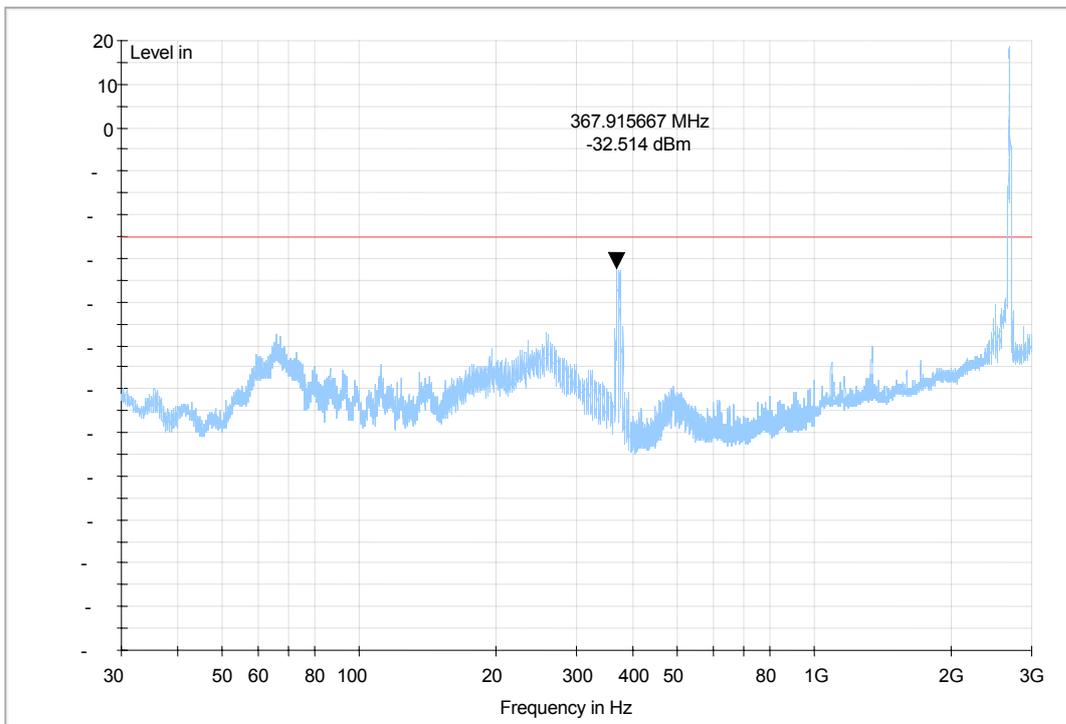
Traffic Mode (18GHz-26.5GHz)



8.3.2 For WIMAX 2.5G (Channel Bandwidth=10MHz) Traffic Mode (9kHz-30MHz)

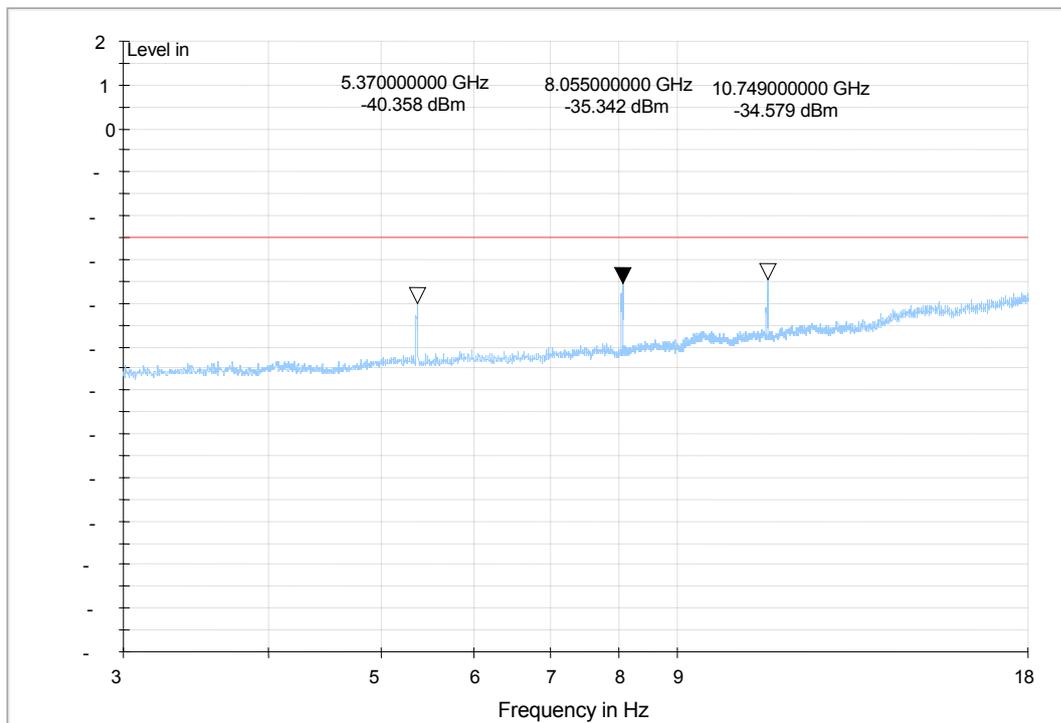


Traffic Mode (30MHz-3GHz)

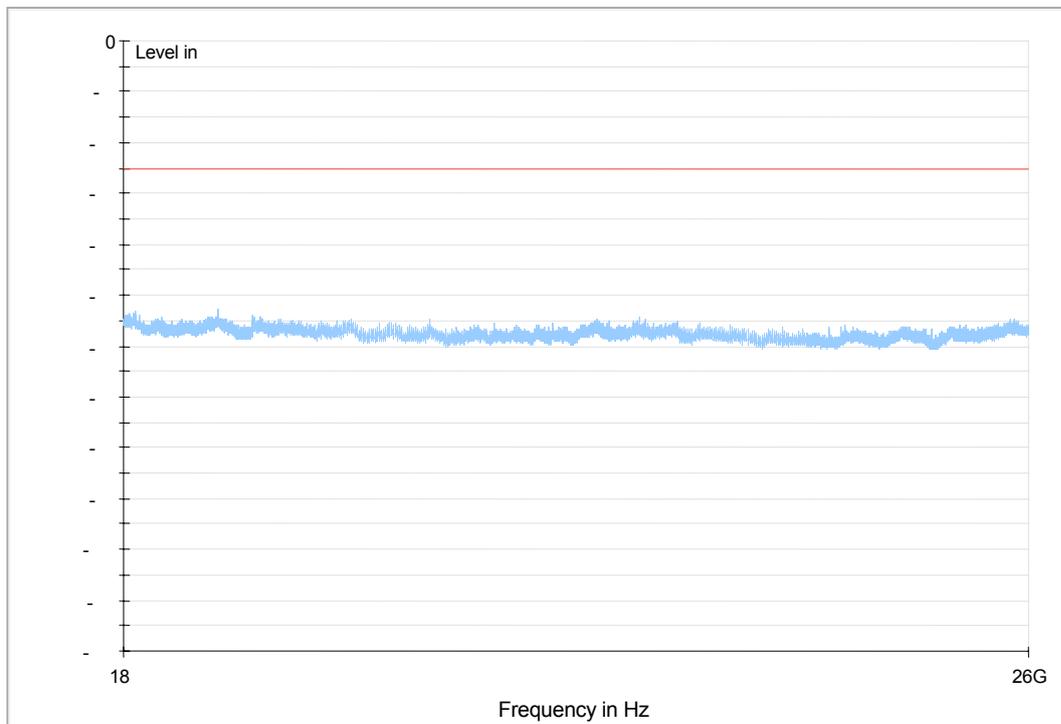




Traffic Mode (3GHz-18GHz)



Traffic Mode (18GHz-26.5GHz)



-----**END**-----