FCC REPORT

Applicant: SUNUP MECHA-ELECTRONIC EQUIPMENT CO.,LTD

Address of Applicant: 517 Room F building, Taoyuan Road No.1, Nanshan district,

Shenzhen, China

Equipment Under Test (EUT)

Product Name: MAG II

Model No.: MCJB21PA, MCJB21PX(X=A~Z)

FCC ID: YPWMCJB21PA

Applicable standards: FCC CFR Title 47 Part 15 Subpart C Section 15.249: 2011

Date of sample receipt: 14 Sep., 2012

Date of Test: 17 Sep., to 08 Oct 2012

Date of report issued: 10 Oct., 2012

Test Result: PASS *

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



Bruce Zhang Laboratory Manager

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the CCIS product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.

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2 Version

| Version No. | Date | Description |
|-------------|---------------|-------------|
| 00 | 10 Oct., 2012 | Original |
| | | |
| | | |
| | | |
| | | |

Prepared By: Date: 10 Oct., 2012

Project Engineer

Check By: Date: 10 Oct., 2012

Reviewer

Telephone: +86 (0) 755 23118282 Fax: +86 (0) 755 23116366



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4 Test Summary

| Test Item | Section in CFR 47 | Result |
|--|-----------------------|--------|
| Antenna requirement | 15.203 | Pass |
| AC Power Line Conducted Emission | 15.207 | N/A |
| Field strength of the fundamental signal | 15.249 (a) | Pass |
| Spurious emissions | 15.249 (a) (d)/15.209 | Pass |
| Band edge | 15.249 (d)/15.205 | Pass |
| 20dB Occupied Bandwidth | 15.215 (c) | Pass |

Pass: The EUT comply with the essential requirements in the standard.

N/A: Not application for battery device.



5 General Information

5.1 Client Information

| Applicant: | SUNUP MECHA-ELECTRONIC EQUIPMENT CO.,LTD |
|--------------------------|---|
| Address of Applicant: | 517 Room F building, Taoyuan Road No.1, Nanshan district, Shenzhen, China |
| Manufacturer: | SUNUP MECHA-ELECTRONIC EQUIPMENT CO.,LTD |
| Address of Manufacturer: | 517 Room F building, Taoyuan Road No.1, Nanshan district, Shenzhen, China |
| Factory: | SUNUP MECHA-ELECTRONIC EQUIPMENT CO.,LTD |
| Address of Factory: | 517 Room F building, Taoyuan Road No.1, Nanshan district, Shenzhen, China |

5.2 General Description of E.U.T.

| Product Name: | MAG II |
|----------------------|---|
| Model No.: | MCJB21PA, MCJB21PX(X=A~Z) |
| Operation Frequency: | 2403MHz to 2480MHz |
| Channel numbers: | 78 |
| Modulation type: | GFSK |
| Antenna Type: | Integrated PCB antenna |
| Antenna gain: | 0dBi |
| Power supply: | 4* 1.5 V "AA" Battery |
| Remark: | Only the model No. MCJB21PA was tested, MCJB21PA and MCJB21PX(X=A~Z) were identical inside, since the electrical circuit design, layout, components used and internal wiring were identical for the above items, with only difference being the model name for the marketing requirement, MCJB21PX(X=A~Z, X: delegate different sales territory). |



5.3 Test mode

| Transmitting mode: | Keep the EUT in tran | Keep the EUT in transmitting mode with modulation. | | | | |
|--|--|--|--|--|--|--|
| Pre-Test Mode: (lowest channel=2403MHz) | | | | | | |
| | CCIS has verified the construction and function in typical operation, The EUT was placed on three different polar directions; i.e. X axis, Y axis, Z axis. which was shown in this test report and defined as follows: | | | | | |
| Axis X Y Z | | | | | | |
| Field Strength(dBuV/m) 83.62 83.42 84.61 | | | | | | |

Final Test Mode:

According to ANSI C63.4 standards, the test results are both the "worst case" and "worst setup": Z axis (see the test setup photo)

5.4 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

● FCC —Registration No.: 817957

China Certification & Inspection Services Co., Ltd., Shenzhen EMC Laboratory has been registered and

fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in out files. Registration 817957, February 27, 2012

Industry Canada (IC)

The 3m Semi-anechoic chamber of China Certification & Inspection Services Co., Ltd. Has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

5.5 Test Location

All tests were performed at:

China Certification & Inspection Services Co., Ltd.

Address: 1st Floor, Block No.2, Laodong Industrial Zone, Xixiang Road Baoan District, Shenzhen,

China

Tel: 0755-23118282 Fax: 0755-23116366

5.6 Other Information Requested by the Customer

None.

China Certification & Inspection Services Co., Ltd.
1st Floor, Block No.2, Laodong Industrial Zone, Xixiang Road Baoan District, Shenzhen, China 518102

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5.7 Test Instruments list

| Radiated Emission: | | | | | | | | | |
|--------------------|----------------------------------|-----------------------------------|-----------------------------|------------------|------------------------|----------------------------|--|--|--|
| Item | Test Equipment | Manufacturer | Model No. | Inventory No. | Cal.Date (mm-dd-yy) | Cal.Due date (mm-dd-yy) | | | |
| 1 | 3m Semi- Anechoic Chamber | SAEMC | 9(L)*6(W)* 6(H) | CCIS0001 | Aug. 09 2012 | Aug. 09 2013 | | | |
| 2 | EMI Test Receiver | Rohde & Schwarz | ESCI | CCIS0002 | June 16 2012 | June 16 2013 | | | |
| 3 | BiConiLog Antenna | SCHWARZBECK MESS-ELEKTRONIK | VULB9163 | CCIS0005 | June 09 2012 | June 09 2013 | | | |
| 4 | Double -ridged waveguide horn | SCHWARZBECK MESS-ELEKTRONIK | BBHA9120D | CCIS0006 | June 09 2012 | June 09 2013 | | | |
| 5 | EMI Test Software | AUDIX | E3 | N/A | N/A | N/A | | | |
| 6 | Coaxial Cable | CCIS | N/A | CCIS0016 | Mar. 01 2012 | Mar. 01 2013 | | | |
| 7 | Coaxial Cable | CCIS | N/A | CCIS0017 | Mar. 01 2012 | Mar. 01 2013 | | | |
| 8 | Coaxial cable | CCIS | N/A | CCIS0018 | Mar. 01 2012 | Mar. 01 2013 | | | |
| 9 | Coaxial Cable | CCIS | N/A | CCIS0019 | Mar. 01 2012 | Mar. 01 2013 | | | |
| 10 | Coaxial Cable | CCIS | N/A | CCIS0087 | Mar. 01 2012 | Mar. 01 2013 | | | |
| 11 | Amplifier(10KHz-1.3GHz) | HP | 8447D | CCIS0003 | Aug. 03 2012 | Aug. 03 2013 | | | |
| 12 | Amplifier(1GHz-18GHz) | Compliance Direction Systems Inc. | PAP-1G18 | CCIS0011 | Aug. 05 2012 | Aug. 05 2013 | | | |
| 13 | Spectrum analyzer | Rohde & Schwarz | FSP | CCIS0023 | June 22 2012 | June 22 2013 | | | |
| 14 | EMI Test Receiver | Rohde & Schwarz | ECSI | CCIS0002 | June16 2012 | June 16 2013 | | | |
| 15 | Printer | HP | HP LaserJet P1007 | N/A | N/A | N/A | | | |
| 16 | Coaxial Cable | CCIS | N/A | CCIS0095 | Mar. 01 2012 | Mar. 01 2013 | | | |
| 17 | Pre-amplifier (18-26GHz) | Rohde & Schwarz | AFS33-18002 650-30-8P-44 | GTS218 | Apr. 01 2012 | Mar. 31 2013 | | | |
| 18 | Horn Antenna | ETS-LINDGREN | 3160 | GTS217 | Mar. 30 2012 | Mar. 29 2013 | | | |

| Cond | Conducted Emission: | | | | | | | | | | |
|---------------------|---------------------|------------------------|-----------------------|------------------|------------------------|----------------------------|--|--|--|--|--|
| Item Test Equipment | | Manufacturer Model No. | | Inventory No. | Cal.Date (mm-dd-yy) | Cal.Due date (mm-dd-yy) | | | | | |
| 1 | Shielding Room | ZhongShuo Electron | 11.0(L)x4.0(W)x3.0(H) | CCIS0061 | June 09 2012 | June 09 2013 | | | | | |
| 2 | EMI Test Receiver | Rohde & Schwarz | ESPI | CCIS0022 | Apr 01 2012 | Apr 01 2013 | | | | | |
| 3 | LISN | CHASE | MN2050D | CCIS0074 | Apr 01 2012 | Apr 01 2013 | | | | | |
| 4 | Coaxial Cable | CCIS | N/A | CCIS0086 | Apr. 01 2012 | Apr. 01 2013 | | | | | |
| 5 | EMI Test Software | AUDIX | E3 | N/A | N/A | N/A | | | | | |

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6 Test results and Measurement Data

6.1 Antenna requirement:

Standard requirement: FCC Part15 C Section 15.203

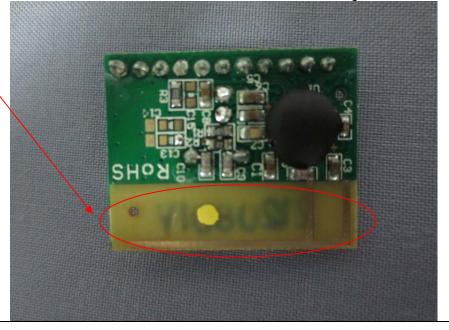
15.203 requirement:

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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

E.U.T Antenna:

The antenna is PCB antenna which cannot detachable. The best case gain of the antenna is 0dBi.

Antenna



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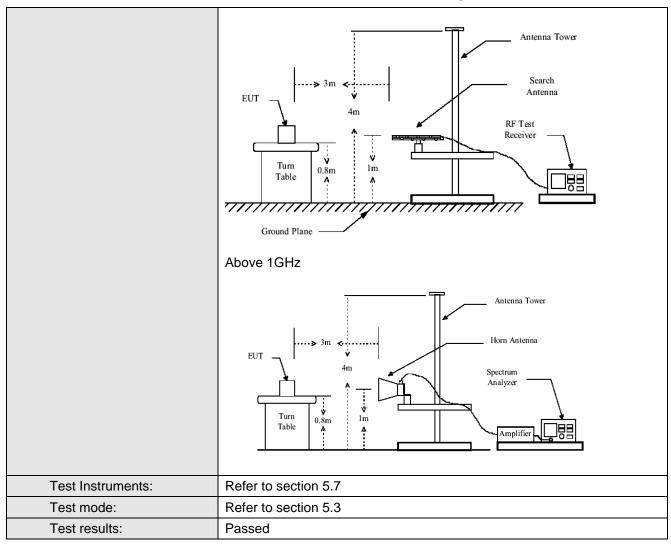
6.2 Radiated Emission

| Test Requirement: F0 | FCC Part15 C Section 15.249 and 15.209 | | | | | | | |
|--|--|------------|-----------------------|--------|--------------------------------------|--|--|--|
| Test Method: Al | ANSI C63.4:2003 | | | | | | | |
| Test Frequency Range: 30 | 30MHz to 25000MHz | | | | | | | |
| Test site: M | Measurement Distance: 3m | | | | | | | |
| Receiver setup: | | | | | | | | |
| | Frequency | Detector | RBW | VBW | Remark | | | |
| | 30MHz-1GHz | Quasi-peak | 100KHz | 300KHz | Quasi-peak Value | | | |
| | Above 1GHz | Peak | 1MHz | 3MHz | Peak Value | | | |
| | Above 10112 | Peak | 1MHz | 10Hz | Average Value | | | |
| Limit: | | | | | | | | |
| (Field strength of the | Freque | ncy | Limit (dBuV/ | | Remark | | | |
| fundamental signal) | 2400MHz-24 | 83.5MHz | 94.0 | | Average Value | | | |
| | | | 114.0 |)() | Peak Value | | | |
| Limit: | | | 1: :(/ID)// | · | Б | | | |
| (Spurious Emissions) | Freque | | Limit (dBuV/ 40.00 | • | Remark | | | |
| - | 30MHz-88 88MHz-21 | | 40.00 | | Quasi-peak Value Quasi-peak Value | | | |
| _ | 216MHz-9 | | 46.0 | | Quasi-peak Value | | | |
| | 960MHz- | | 54.0 | | Quasi-peak Value | | | |
| - | | | | | | | | |
| | Above 1(iHz | | | | | | | |
| (band edge) Test Procedure: 1. 2. 3. | Above 1GHz 54.00 Average Value 74.00 Peak Value Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation. 1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. 2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. 4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported | | | | | | | |
| Test setup: | elow 1GHz | | | | | | | |

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CCIS

Report No: CCIS12090016101





Measurement Data

6.2.1 Field Strength Of The Fundamental Signal

Peak value:

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
|--------------------|-------------------------|-----------------------------|--------------------|--------------------------|-------------------|------------------------|--------------------|--------------|
| 2403.00 | 79.44 | 27.54 | 3.83 | 30.20 | 80.61 | 114.00 | -33.39 | Horizontal |
| 2403.00 | 83.44 | 27.54 | 3.83 | 30.20 | 84.61 | 114.00 | -29.39 | Vertical |
| 2441.00 | 78.83 | 27.46 | 3.85 | 30.40 | 79.74 | 114.00 | -34.26 | Horizontal |
| 2441.00 | 82.52 | 27.46 | 3.85 | 30.40 | 83.43 | 114.00 | -30.57 | Vertical |
| 2480.00 | 81.83 | 27.52 | 3.89 | 30.60 | 82.64 | 114.00 | -31.36 | Horizontal |
| 2480.00 | 83.70 | 27.52 | 3.89 | 30.60 | 84.51 | 114.00 | -29.49 | Vertical |

Average value:

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
|--------------------|-------------------------|-----------------------------|--------------------|--------------------------|-------------------|------------------------|--------------------|--------------|
| 2403.00 | 75.79 | 27.54 | 3.83 | 30.20 | 76.96 | 94.00 | -17.04 | Horizontal |
| 2403.00 | 78.68 | 27.54 | 3.83 | 30.20 | 79.85 | 94.00 | -14.15 | Vertical |
| 2441.00 | 73.38 | 27.46 | 3.85 | 30.40 | 74.29 | 94.00 | -19.71 | Horizontal |
| 2441.00 | 78.48 | 27.46 | 3.85 | 30.40 | 79.39 | 94.00 | -14.61 | Vertical |
| 2480.00 | 76.00 | 27.52 | 3.89 | 30.60 | 76.81 | 94.00 | -17.19 | Horizontal |
| 2480.00 | 79.00 | 27.52 | 3.89 | 30.60 | 79.81 | 94.00 | -14.19 | Vertical |



6.2.2 Spurious Emissions

30MHz~1GHz

| | · · · · · · · · · · · · · · · · · · · | | | | | | | | | |
|--------------------|---------------------------------------|-----------------------------|-----------------------|--------------------------|-------------------|------------------------|-----------------------|--------------|--|--|
| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization | | |
| 131.76 | 36.46 | 8.82 | 2.30 | 29.50 | 18.08 | 43.50 | -25.42 | Vertical | | |
| 191.75 | 43.56 | 10.56 | 2.81 | 29.83 | 27.10 | 43.50 | -16.40 | Vertical | | |
| 239.99 | 41.21 | 12.09 | 2.82 | 29.64 | 26.48 | 46.00 | -19.52 | Vertical | | |
| 383.93 | 37.70 | 14.68 | 3.09 | 29.83 | 25.64 | 46.00 | -20.36 | Vertical | | |
| 125.13 | 52.68 | 9.70 | 2.22 | 29.62 | 34.98 | 43.50 | -8.52 | Vertical | | |
| 191.75 | 55.49 | 10.56 | 2.81 | 29.83 | 39.03 | 43.50 | -4.47 | Horizontal | | |
| 239.99 | 53.89 | 12.09 | 2.82 | 29.64 | 39.16 | 46.00 | -6.84 | Horizontal | | |
| 287.99 | 49.94 | 12.84 | 2.91 | 29.47 | 36.22 | 46.00 | -9.78 | Horizontal | | |
| 383.93 | 47.74 | 14.68 | 3.09 | 29.83 | 35.68 | 46.00 | -10.32 | Horizontal | | |
| 752.74 | 42.75 | 19.48 | 4.36 | 30.49 | 36.10 | 46.00 | -9.90 | Horizontal | | |

Above 1GHz Test channel:

| Test Charline | Lowest Level. | | | reak | | | | |
|--------------------|-------------------------|-----------------------------|-----------------------|--------------------------|-------------------|------------------------|-----------------------|--------------|
| | | | | | | | | _ |
| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 4806.00 | 46.66 | 31.78 | 5.32 | 24.09 | 59.67 | 74.00 | -14.33 | Vertical |
| 7209.00 | 42.55 | 36.15 | 6.87 | 26.38 | 59.19 | 74.00 | -14.81 | Vertical |
| 9612.00 | 37.76 | 37.95 | 8.94 | 25.40 | 59.25 | 74.00 | -14.75 | Vertical |
| 4806.00 | 44.56 | 31.78 | 5.32 | 24.09 | 57.57 | 74.00 | -16.43 | Horizontal |
| 7209.00 | 37.42 | 36.15 | 6.87 | 26.38 | 54.06 | 74.00 | -19.94 | Horizontal |
| 9612.00 | 28.65 | 37.95 | 8.94 | 25.40 | 50.14 | 74.00 | -23.86 | Horizontal |

I evel·

| Test channe | l: | L | owest | | Level: | | Average | |
|--------------------|-------------------------|-----------------------------|-----------------------|--------------------------|-------------------|------------------------|-----------------------|--------------|
| | | | | | | | | |
| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 4806.00 | 31.55 | 31.78 | 5.32 | 24.09 | 44.56 | 54.00 | -9.44 | Vertical |
| 7209.00 | 29.43 | 36.15 | 6.87 | 26.38 | 46.07 | 54.00 | -7.93 | Vertical |
| 9612.00 | 21.55 | 37.95 | 8.94 | 25.40 | 43.04 | 54.00 | -10.96 | Vertical |
| 4806.00 | 35.44 | 31.78 | 5.32 | 24.09 | 48.45 | 54.00 | -5.55 | Horizontal |
| 7209.00 | 17.55 | 36.15 | 6.87 | 26.38 | 34.19 | 54.00 | -19.81 | Horizontal |
| 9612.00 | 15.56 | 37.95 | 8.94 | 25.40 | 37.05 | 54.00 | -16.95 | Horizontal |

Remark:

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

Lowest

2. The emission levels of other frequencies are very lower than the limit and not show in test report.

China Certification & Inspection Services Co., Ltd. 1st Floor, Block No.2, Laodong Industrial Zone, Xixiang Road Baoan District, Shenzhen, China 518102

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Average

| Test channe | Test channel: | | /liddle | | Level: | Level: | | Peak | |
|--------------------|-------------------------|-----------------------------|-----------------------|--------------------------|-------------------|------------------------|-----------------------|--------------|--|
| | | | | | | | | | |
| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization | |
| 4882.00 | 46.66 | 31.85 | 5.40 | 24.01 | 59.90 | 74.00 | -14.10 | Vertical | |
| 7323.00 | 42.55 | 36.37 | 6.91 | 26.62 | 59.21 | 74.00 | -14.79 | Vertical | |
| 9764.00 | 37.76 | 38.35 | 9.01 | 25.29 | 59.83 | 74.00 | -14.17 | Vertical | |
| 4882.00 | 44.56 | 31.85 | 5.40 | 24.01 | 57.80 | 74.00 | -16.20 | Horizontal | |
| 7323.00 | 37.45 | 36.37 | 6.91 | 26.62 | 54.11 | 74.00 | -19.89 | Horizontal | |
| 9764.00 | 28.65 | 38.35 | 9.01 | 25.29 | 50.72 | 74.00 | -23.28 | Horizontal | |

| | | | | | • | | | <u> </u> |
|--------------------|-------------------------|-----------------------------|-----------------------|--------------------------|-------------------|------------------------|-----------------------|--------------|
| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 4882.00 | 31.55 | 31.85 | 5.40 | 24.01 | 44.79 | 54.00 | -9.21 | Vertical |
| 7323.00 | 29.46 | 36.37 | 6.91 | 26.62 | 46.12 | 54.00 | -7.88 | Vertical |
| 9764.00 | 21.55 | 38.35 | 9.01 | 25.29 | 43.62 | 54.00 | -10.38 | Vertical |
| 4882.00 | 35.44 | 31.85 | 5.40 | 24.01 | 48.68 | 54.00 | -5.32 | Horizontal |
| 7323.00 | 17.55 | 36.37 | 6.91 | 26.62 | 34.21 | 54.00 | -19.79 | Horizontal |
| 9764 00 | 15 56 | 38 35 | 9.01 | 25 29 | 37 63 | 54 00 | -16.37 | Horizontal |

Level:

Remark:

Test channel:

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

Middle

2. The emission levels of other frequencies are very lower than the limit and not show in test report.



Average

-9.17

Horizontal

| Test channe | l: | H | lighest | | Level: | | Peak | |
|--------------------|-------------------------|-----------------------------|-----------------------|--------------------------|-------------------|------------------------|-----------------------|--------------|
| | | | | | | | | |
| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamp Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 4960.00 | 43.82 | 31.93 | 5.47 | 23.93 | 57.29 | 74.00 | -16.71 | Vertical |
| 7440.00 | 39.78 | 36.59 | 6.95 | 26.95 | 56.37 | 74.00 | -17.63 | Vertical |
| 9920.00 | 34.98 | 38.81 | 9.07 | 25.22 | 57.64 | 74.00 | -16.36 | Vertical |
| 4960.00 | 42.76 | 31.93 | 5.47 | 23.93 | 56.23 | 74.00 | -17.77 | Horizontal |
| 7440.00 | 35.75 | 36.59 | 6.95 | 26.95 | 52.34 | 74.00 | -21.66 | Horizontal |
| 9920.00 | 28.86 | 38.81 | 9.07 | 25.22 | 51.52 | 74.00 | -22.48 | Horizontal |

| Fraguenay | Read | Antenna | Cable | Preamp | Level | Limit Line | Over | |
|--------------------|--------|---------|-------|--------|------------|------------|--------|--------------|
| Frequency (MHz) | Level | Factor | Loss | Factor | (dBuV/m) | (dBuV/m) | Limit | Polarization |
| (IVITZ) | (dBuV) | (dB/m) | (dB) | (dB) | (ubuv/III) | (ubuv/III) | (dB) | |
| 4960.00 | 31.80 | 31.93 | 5.47 | 23.93 | 45.27 | 54.00 | -8.73 | Vertical |
| 7440.00 | 26.83 | 36.59 | 6.95 | 26.95 | 43.42 | 54.00 | -10.58 | Vertical |
| 9920.00 | 18.83 | 38.81 | 9.07 | 25.22 | 41.49 | 54.00 | -12.51 | Vertical |
| 4960.00 | 33.71 | 31.93 | 5.47 | 23.93 | 47.18 | 54.00 | -6.82 | Horizontal |
| 7440.00 | 28.83 | 36.59 | 6.95 | 26.95 | 45.42 | 54.00 | -8.58 | Horizontal |

25.22

Level:

44.83

54.00

Remark:

9920.00

22.17

38.81

Test channel:

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

9.07

Highest

2. The emission levels of other frequencies are very lower than the limit and not show in test report.



6.2.3 Band edge (Radiated Emission)

| Test | t channel: | | Lowest | | | Level | : | Peak | |
|--------------------|----------------------|-----------------------------|--------------------|-------------------------|---|-------------------|------------------------|--------------------|--------------|
| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Pream Factor (dB) | | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 2390.00 | 51.47 | 27.59 | 3.33 | 30.10 |) | 52.29 | 74.00 | -21.71 | Horizontal |
| 2400.00 | 55.63 | 27.58 | 3.37 | 30.10 |) | 56.48 | 74.00 | -17.52 | Horizontal |
| 2390.00 | 52.82 | 27.59 | 3.33 | 30.10 |) | 53.64 | 74.00 | -20.36 | Vertical |
| 2400.00 | 56.69 | 27.58 | 3.37 | 30.10 |) | 57.54 | 74.00 | -16.46 | Vertical |

| Tes | t channel: | | Lowest | | | Level | : | Average | |
|--------------------|----------------------|-----------------------------|--------------------|-------------------------|---|-------------------|------------------------|--------------------|--------------|
| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Pream Factor (dB) | | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 2390.00 | 35.11 | 27.59 | 3.33 | 30.10 |) | 35.93 | 54.00 | -18.07 | Horizontal |
| 2400.00 | 38.62 | 27.58 | 3.37 | 30.10 |) | 39.47 | 54.00 | -14.53 | Horizontal |
| 2390.00 | 36.46 | 27.59 | 3.33 | 30.10 |) | 37.28 | 54.00 | -16.72 | Vertical |
| 2400.00 | 39.68 | 27.58 | 3.37 | 30.10 |) | 40.53 | 54.00 | -13.47 | Vertical |

| Test | t channel: | | Highest | | | Level | : | Peak | |
|--------------------|----------------------|-----------------------------|--------------------|-------------------------|---|-------------------|------------------------|--------------------|--------------|
| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Pream Factor (dB) | | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 2483.50 | 54.32 | 27.53 | 3.49 | 29.93 | } | 55.41 | 74.00 | -18.59 | Vertical |
| 2500.00 | 52.01 | 27.55 | 3.52 | 30.70 |) | 52.38 | 74.00 | -21.62 | Vertical |
| 2483.50 | 57.07 | 27.53 | 3.49 | 29.93 | } | 58.16 | 74.00 | -15.84 | Horizontal |
| 2500.00 | 53.41 | 27.55 | 3.52 | 30.70 |) | 53.78 | 74.00 | -20.22 | Horizontal |

| Tes | t channel: | | Highest | | | Level | : | Average | |
|--------------------|----------------------|-----------------------------|--------------------|-------------------------|---|-------------------|------------------------|--------------------|--------------|
| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Pream Factor (dB) | | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | Polarization |
| 2483.50 | 38.87 | 27.53 | 3.49 | 29.93 | 3 | 39.96 | 54.00 | -14.04 | Vertical |
| 2500.00 | 34.30 | 27.55 | 3.52 | 30.70 |) | 34.67 | 54.00 | -19.33 | Vertical |
| 2483.50 | 40.27 | 27.53 | 3.49 | 29.93 | } | 41.36 | 54.00 | -12.64 | Horizontal |
| 2500.00 | 35.46 | 27.55 | 3.52 | 30.70 |) | 35.83 | 54.00 | -18.17 | Horizontal |

Telephone: +86 (0) 755 23118282 Fax: +86 (0) 755 23116366



6.3 20dB Bandwidth

| Test Requirement: | FCC Part15 C Section 15.249/15.215 |
|-------------------|---|
| Test Method: | ANSI C63.4:2003 |
| Receiver setup: | RBW=10kHz, VBW=30kHz, detector: Peak |
| Limit: | Operation Frequency range 2400MHz-2483.5MHz |
| Test Procedure: | According to the follow Test-setup, keep the relative position between the artificial antenna and the EUT. |
| | 2. Set the EUT to proper test channel. |
| | 3. Max hold the radiated emissions, mark the peak power frequency point and the -20dB upper and lower frequency points. |
| | 4. Read 20dB bandwidth. |
| Test setup: | Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane |
| Test Instruments: | Refer to section 4.7 for details |
| Test mode: | Refer to section 4.3 for details |
| Test results: | Passed |

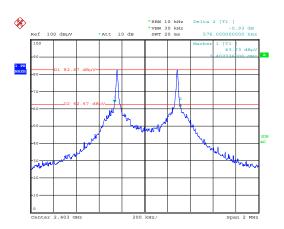
Measurement Data

| Test channel | 20dB bandwidth (MHz) | Results |
|--------------|----------------------|---------|
| Lowest | 0.576 | Pass |
| Middle | 0.588 | Pass |
| Highest | 0.572 | Pass |

Test plot as follows:

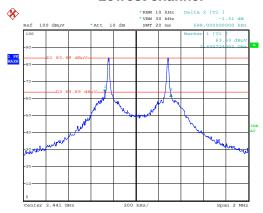
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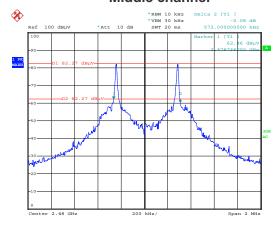
Date: 27.SEP.2012 04:04:18

Lowest channel



Date: 27.SEP.2012 04:05:55

Middle channel



Date: 27.SEP.2012 04:07:14

Highest channel

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