

RAVEON TECHNOLOGY CORPORATION

Data Radio Modem

Model: RV-M7-VM

19 March 2010

Report No.: SL10020501-RTC-001 (RV-M7-VM)
(This report supersedes: None)



EMC Test Report
To: FCC Part 95J

SIEMIC, INC.
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Modifications made to the product : None

This Test Report is Issued Under the Authority of:

| | |
|---|--|
|  |  |
| Choon Sian Ooi Compliance Engineer | Leslie Bai Director of Certification |

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Test result presented in this test report is applicable to the representative sample only.

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|----------------|------------------------|------------------------------------|
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Accreditations for Product Certifications

| Country | Accreditation Body | Scope |
|-----------|--------------------|--------------------|
| USA | FCC TCB, NIST | EMC , RF , Telecom |
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1 Executive Summary & EUT information

The purpose of this test programmed was to demonstrate compliance of the Raveon Technologies Corporation, Model: Nano-UHF against the current Stipulated Standards. The Data Radio Modem have demonstrated compliance with the FCC 95J 2010.

The equipment under test radio operating frequency is 151.82MHz MHz 154.6MHz.

The test has demonstrated that this unit complies with stipulated standards.

EUT Information

- | | |
|--|--|
| EUT Description | <p>: The M7 RF data radio is a rugged high-performance, high-speed narrow-band data modem. It contains a receiver, a transmitter, and modem, creating an easy-to-use transparent data radio link. The M7's user interface is asynchronous RS-232 data into and out of the M7 (CMOS level optional). Modem operation is virtually transparent to the user and the configuration of the modem is via the user serial port.</p> <p>Unlike any other radio modem on the market, the M7 may be operated in either a "Packetized Mode" or a "Streaming Real-Time Mode". There are advantages to each approach, and your choice depends upon how your system operates. For privacy and network versatility, the M7 incorporates a 16 bit identification code. Its protocol also uses a 16bit CRC to guarantee the integrity of the data. Perfect for SCADA and telemetry applications, the M7 can be used for simple point-to-point data communication applications, or for more sophisticated point-to-multipoint, peer-to-peer, or mesh networks. Although the M7 is the easiest to use modem on the market, its reprogrammability makes it extremely versatile. Most parameters within the modem may be re-configured to optimize it</p> |
| Model No | : RV-M7-VM |
| Input Power | : 12.5Vdc |
| Classification Per Stipulated Test Standard | : Licensed Non-Broadcast Station Transmitter |

2 TECHNICAL DETAILS

| | |
|--|---|
| Purpose | Compliance testing of Data Radio Modem, model RV-M7-VM Module with stipulated standard |
| Applicant / Client | Raveon Technologies Corporation |
| Manufacturer | Raveon Technologies Corporation 2780 La Mirada Drive, Suite C Vista, CA 92081 |
| Laboratory performing the tests | SIEMIC Laboratories |
| Test report reference number | SL10020501-RTC-001 (RV-M7-VM) |
| Date EUT received | 04 March 2010 |
| Standard applied | 47 CFR §95J, 22: 2010 |
| Dates of test (from – to) | 09 & 17 March 2010 |
| No of Units: | 1 |
| Equipment Category: | TNB |
| Trade Name: | Raveon Technologies Corporation |
| Model : | RV-M7-VM |
| RF Operating Frequency (ies) | 151.82 MHz – 154.6MHz |
| FCC ID : | SRS -M7-VM |



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3 MODIFICATION

NONE

4 TEST SUMMARY

The product was tested in accordance with the following specifications. All testing has been performed according to below product classification:

Licensed Non-Broadcast Station Transmitter

Test Results Summary

| Test Standard | Description | Pass / Fail |
|---|--|-------------|
| 47 CFR Part 95J: 2010 & RSS119 | | |
| 47 CFR 2.1046, 47 CFR 95.639 | RF Output Power | Pass |
| 47 CFR 2,1047, 47 CFR 95.635 | Modulation characteristic | N/A |
| 47 CFR 2.1049, 47 CFR 95.635 | Occupied Bandwidth, Emission Mask, Emission Limitation | Pass |
| 47 CFR 2.1051, 47 CFR 95.635 | Spurious Emission at Antenna Terminals | Pass |
| 47 CFR 2.1055 | Frequency Stability | N/A |
| 47 CFR 2.1053, 47 CFR 95.635 | Field Strength of Spurious radiation | Pass |
| PS: All measurement uncertainties are not taken into consideration for all presented test result. | | |

The test has demonstrated that this unit complies with stipulated standards.



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5 MEASUREMENTS, EXAMINATION AND DERIVED RESULTS

5.1 Conducted Emissions Voltage

Note: N/A

5.2 RF Output Power

- Conducted Measurement
1. EUT was set for low, mid, high channel with modulated mode and highest RF output power. The spectrum analyzer was connected to the antenna terminal.
 2. Environmental Conditions

| | |
|----------------------|----------|
| Temperature | 25°C |
| Relative Humidity | 50% |
| Atmospheric Pressure | 1019mbar |
 3. Conducted Emissions Measurement Uncertainty
All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2, in the range 30MHz – 20GHz is ±1.5dB.
 4. Test Date : March 09 & 17 2010
Tested By : Choon Sian Ooi

Requirement(s): 47 CFR § 2.1046 and §95.639

No MURS unit, under any condition of modulation, shall not exceed 2 Watts transmitter power output.

Procedures: The RF output power was measured conducted using a spectrum analyzer at low, mid, and hi channels.

Channel bandwidth: 12.5KHz

| Channel | Channel Frequency (MHz) | Power (dBm) |
|---------|-------------------------|-------------|
| Low | 150.00 | 32.50 |
| Mid | 162.5002 | 33.00 |
| High | 174.00 | 33.00 |

Refer to the attached plots.



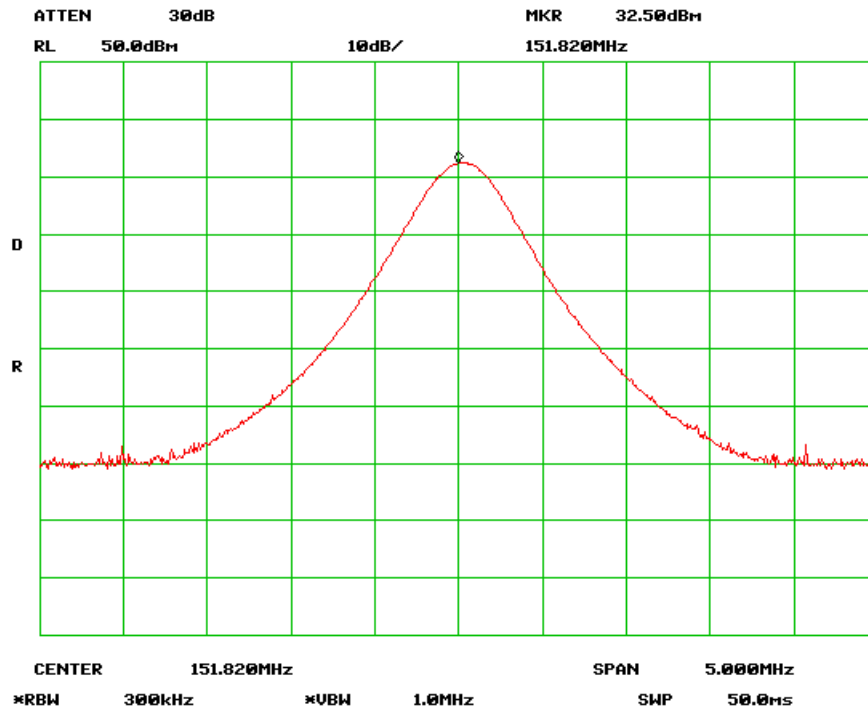
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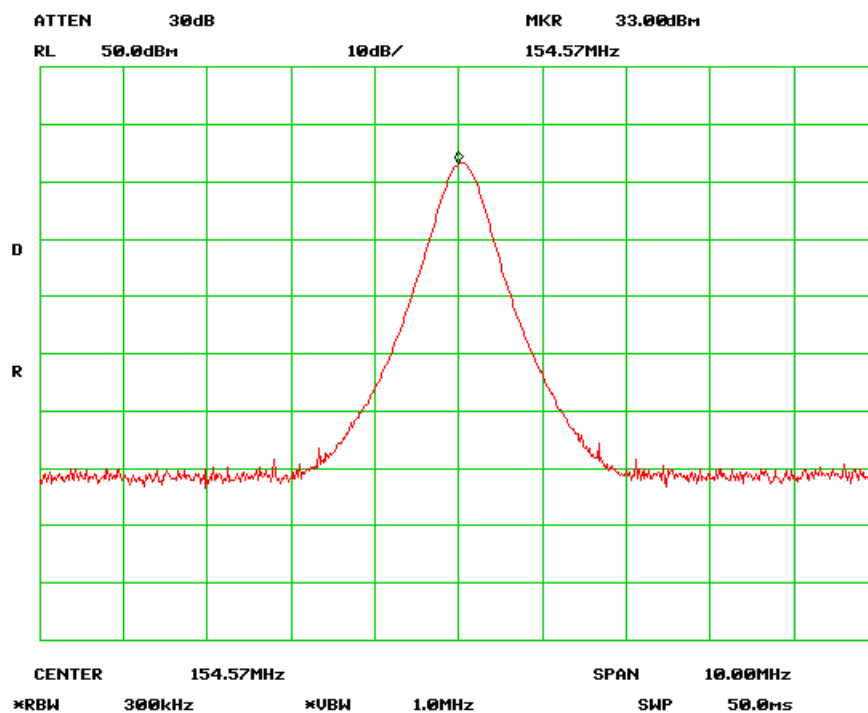
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Low Channel



Middle Channel





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High Channel

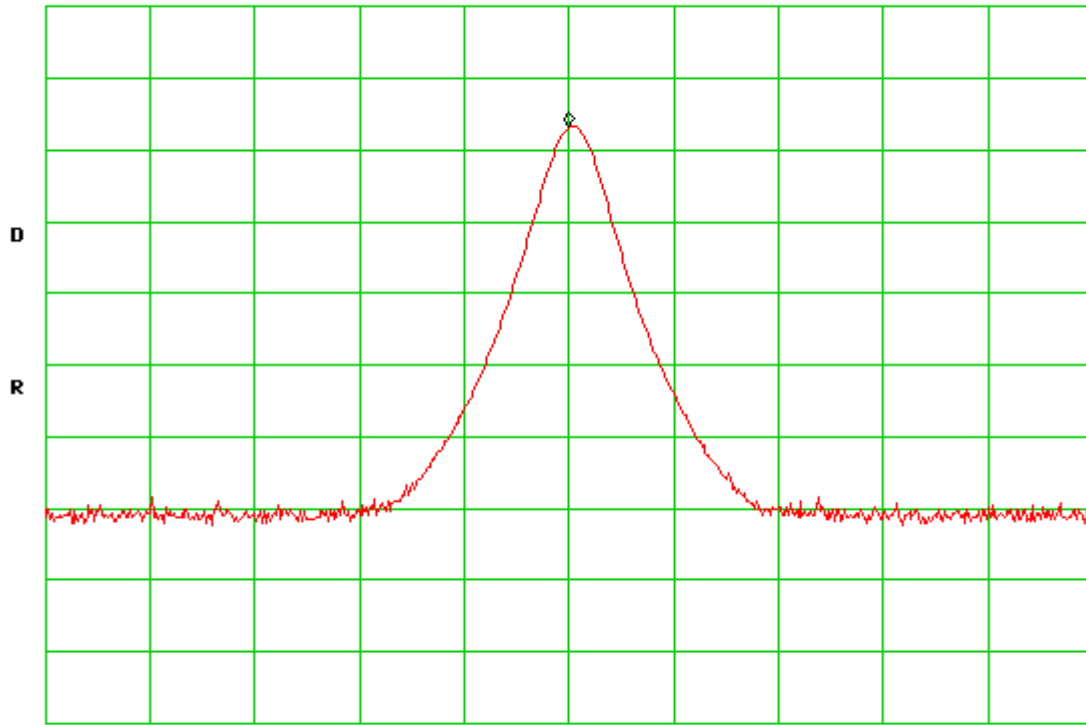
ATTEN 30dB

MKR 33.00dBm

RL 50.0dBm

10dB/

154.60MHz



CENTER 154.60MHz

SPAN 10.00MHz

*RBW 300kHz

*UBW 1.0MHz

SWP 50.0ms

5.3 Occupied Bandwidth

- Conducted Measurement
1. EUT was set for low, mid, high channel with modulated mode and highest RF output power. The spectrum analyzer was connected to the antenna terminal.
 2. Environmental Conditions

| | |
|----------------------|----------|
| Temperature | 25°C |
| Relative Humidity | 50% |
| Atmospheric Pressure | 1019mbar |
 3. Conducted Emissions Measurement Uncertainty
All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2, in the range 30MHz – 40GHz is ± 1.5 dB.
 4. Test Date : March 09 & 17 2010
Tested By : Choon Sian Ooi

Requirement(s): 47 CFR §95.635

Procedures: The 26 dB and 99% bandwidths were measured conducted using a spectrum analyzer at low, mid, and hi channels.

Note: Equipment that is designed for 25KHz bandwidth is authorized a 20KHz channel bandwidth and equipment that is designed for 12.5KHz bandwidth is authorized a 11KHz channel bandwidth.

| Channel Frequency (MHz) | 26 dB Bandwidth (kHz) | 99% bandwidth (KHz) |
|-------------------------|-----------------------|---------------------|
| 151.82 | 8.08 | 5.25 |
| 151.880 | 8.17 | 5.25 |
| 151.940 | 6.67 | 5.33 |
| 154.570 | 8.08 | 5.25 |
| 154.600 | 8.25 | 5.25 |

Refer to the attached plots.



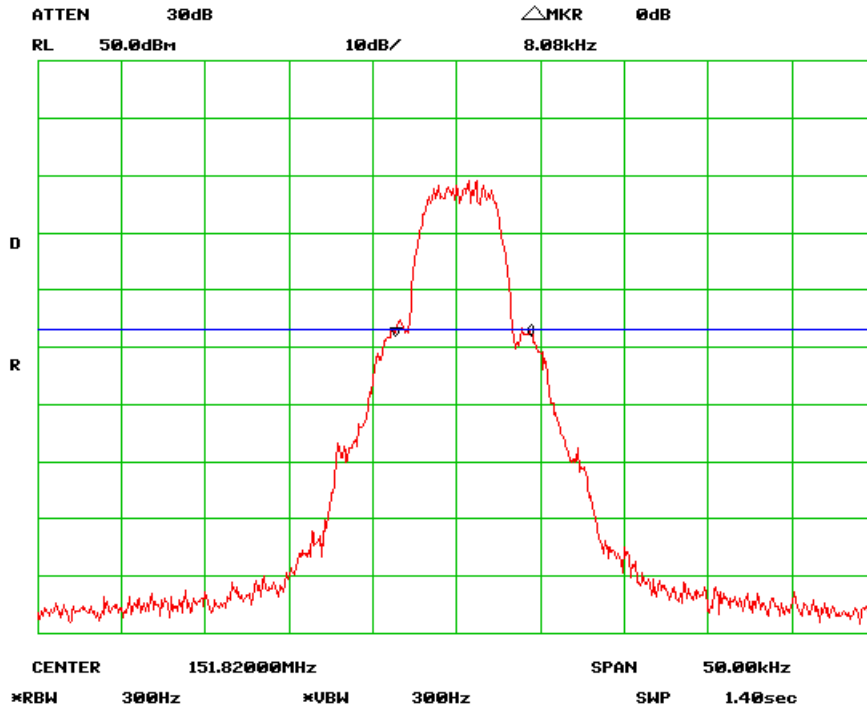
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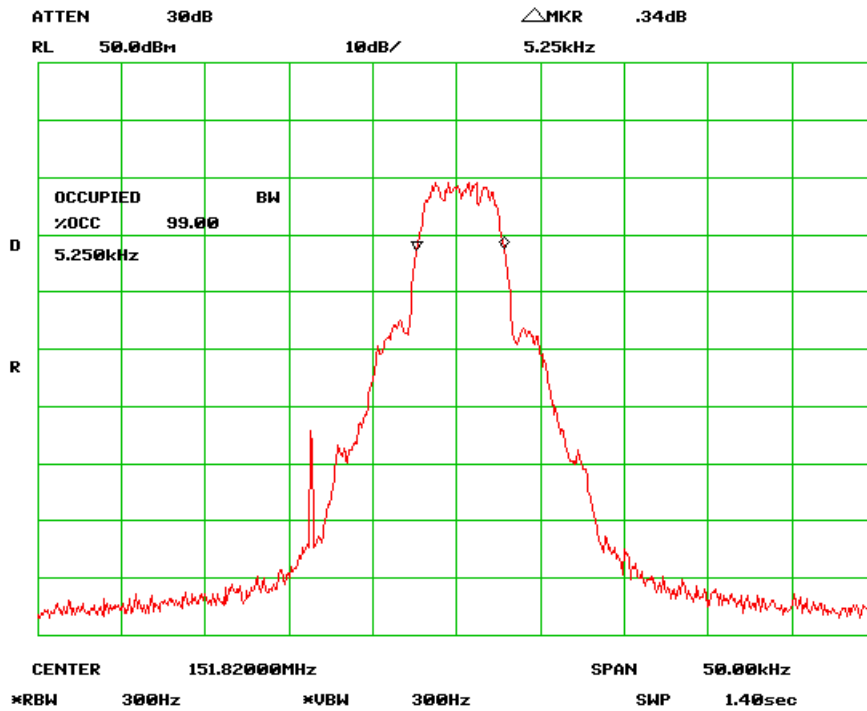
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26 dB Bandwidth - 151.82MHz



99% Bandwidth - 151.82MHz





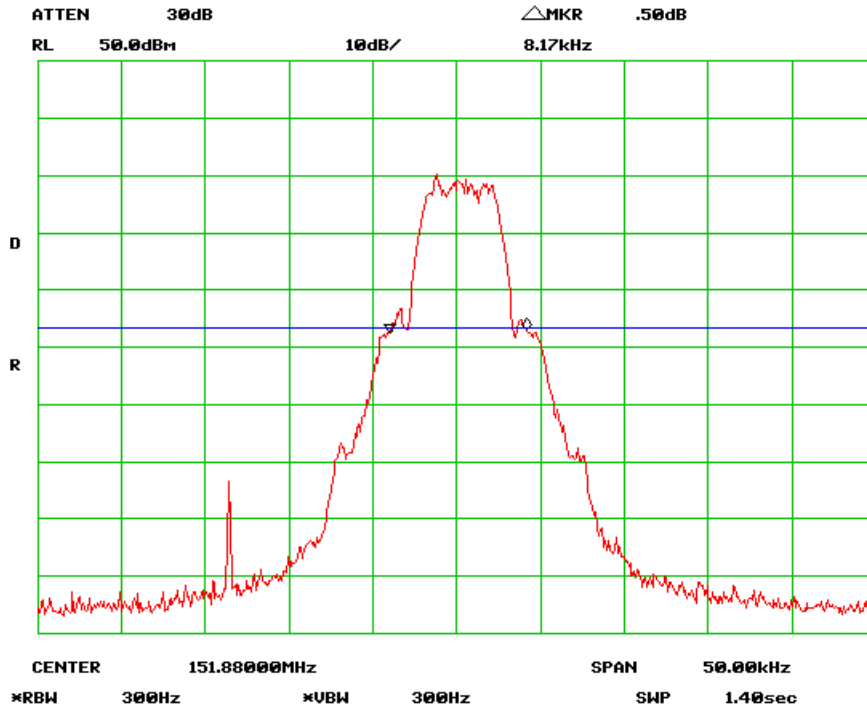
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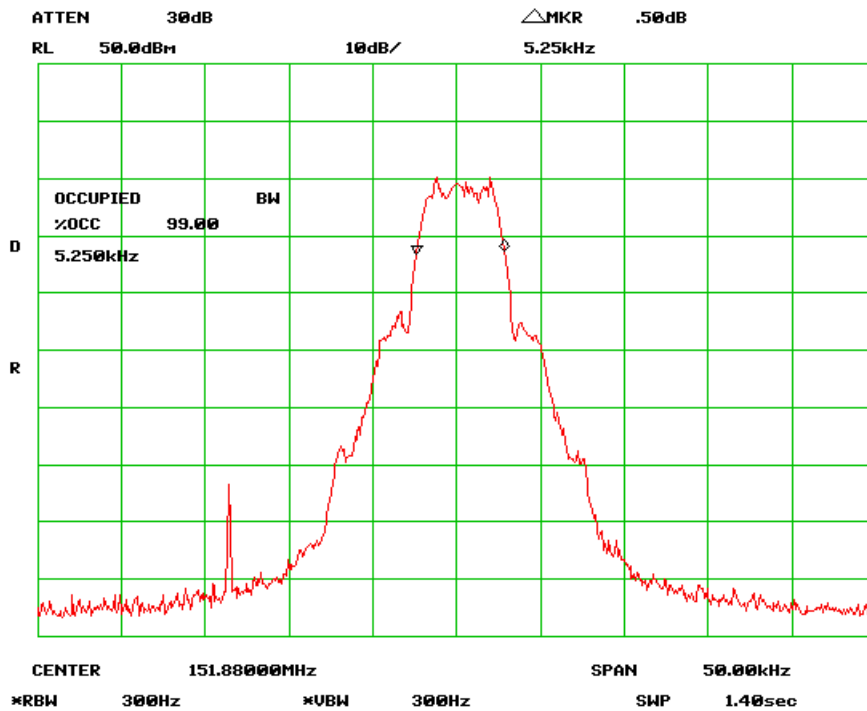
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26 dB Bandwidth – 151.880 MHz



99% Bandwidth - 151.880 MHz





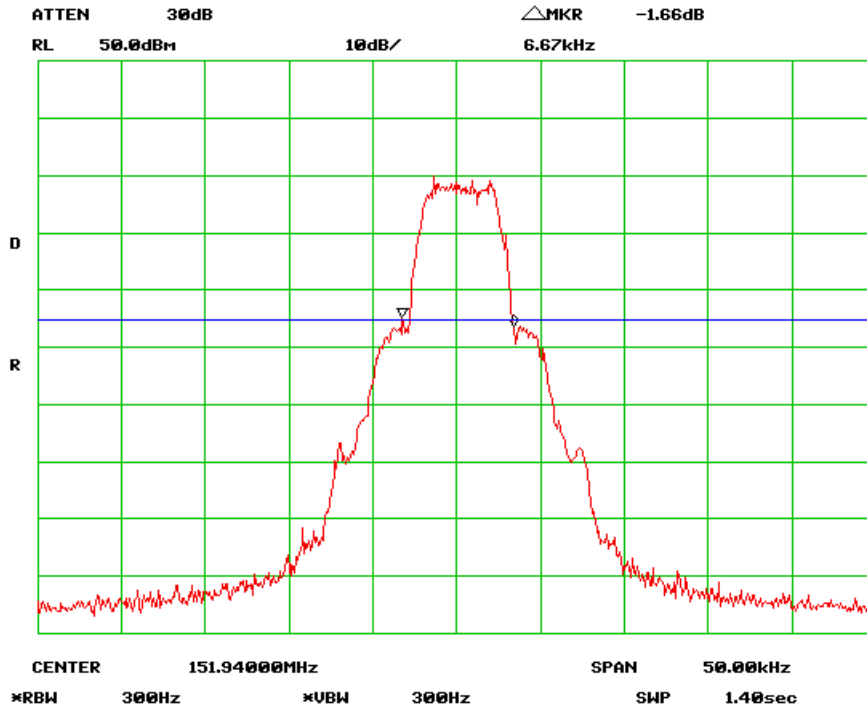
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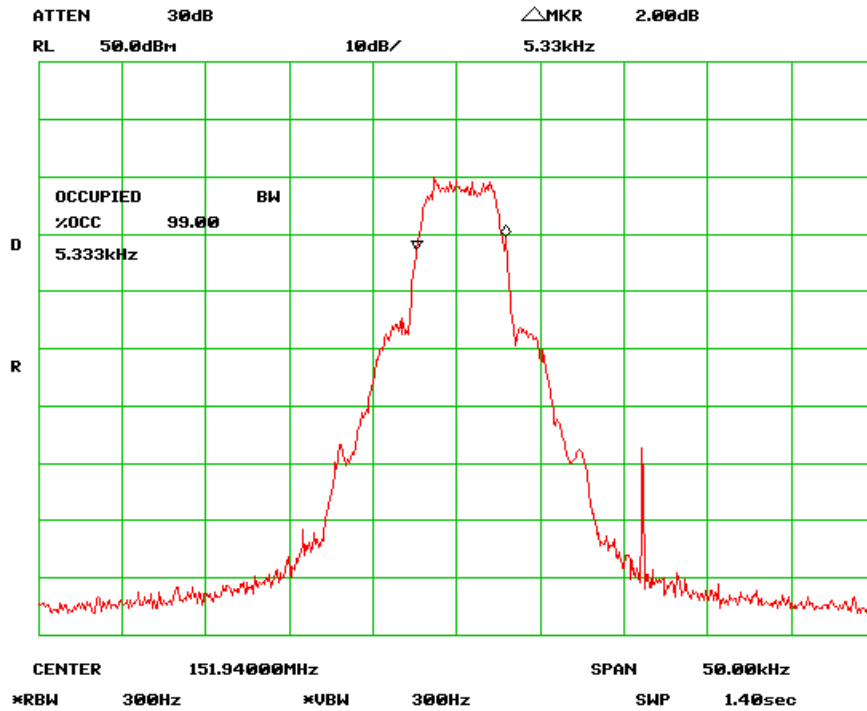
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26dB Bandwidth – 151.940 MHz



99% Bandwidth – 151.940 MHz





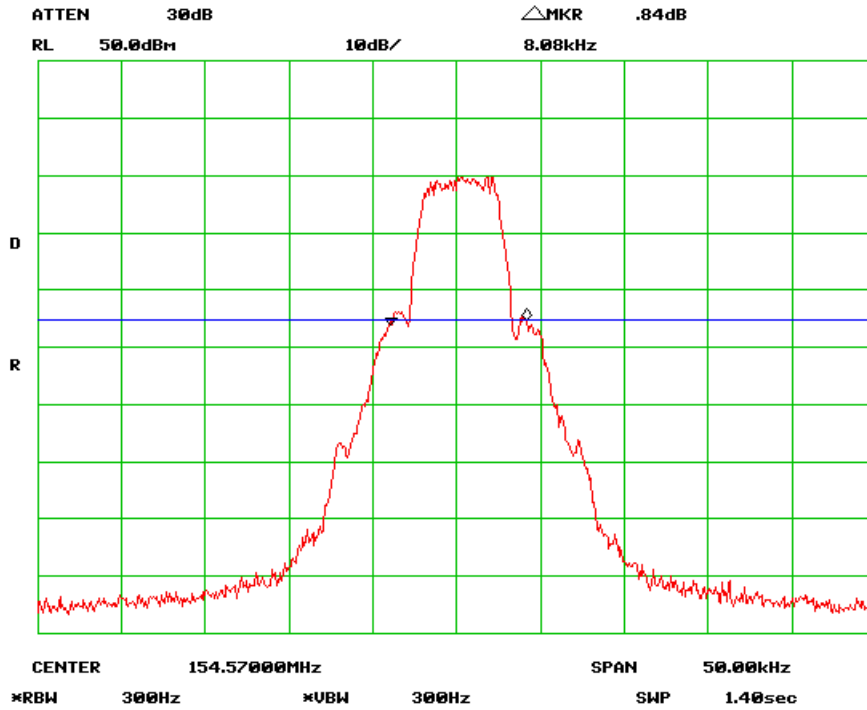
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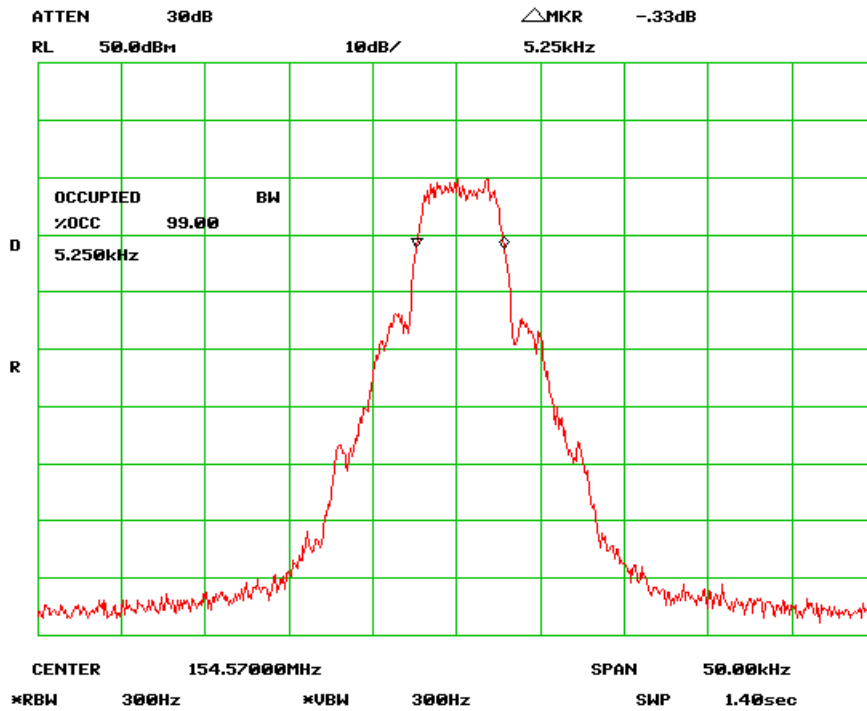
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26dB Bandwidth – 154.570 MHz



99% Bandwidth – 154.570 MHz





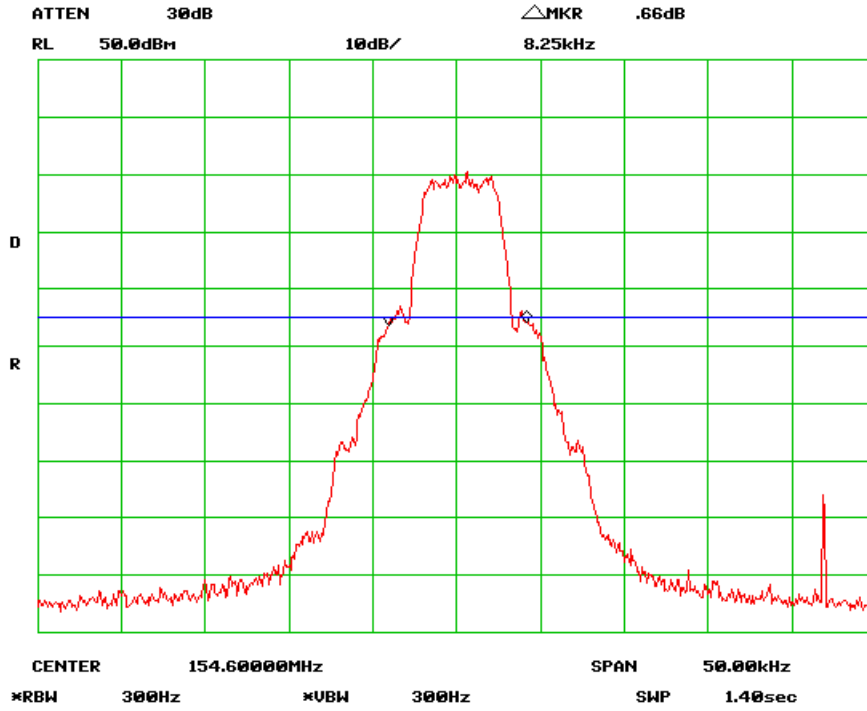
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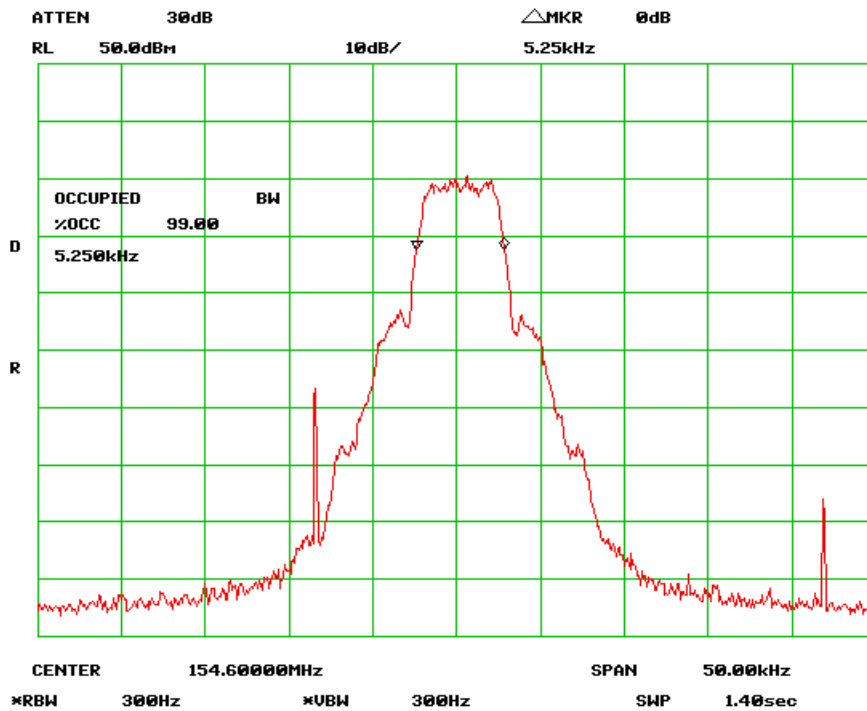
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26dB Bandwidth – 154.600 MHz



26dB Bandwidth – 154.600 MHz



5.4 Emission Mask

1. **Conducted Measurement**
EUT was set for low , mid, high channel with modulated mode and highest RF output power.
The spectrum analyzer was connected to the antenna terminal.
2. **Conducted Emissions Measurement Uncertainty**
All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2, in the range 30MHz – 40GHz is ± 1.5 dB.
3. **Environmental Conditions**
- | | |
|----------------------|----------|
| Temperature | 25°C |
| Relative Humidity | 50% |
| Atmospheric Pressure | 1019mbar |
4. Test Date : March 09 & 17 2010
Tested By : Choon Sian Ooi

Standard Requirement: 47 CFR §95.635

For transmitters designed to operate in the MURS, transmitters shall comply with the following:

| Frequency | Mask with audio low pass filter | Mask without audio low pass filter |
|--|---------------------------------|------------------------------------|
| 151.820 MHz, 151.880 MHz and 151.940 MHz | (1) | (1) |
| 154.570 MHz and 154.600 MHz | (2) | (3) |

(1) *Emission Mask 1* —For transmitters designed to operate with a 12.5 kHz channel bandwidth, any emission must be attenuated below the power (P) of the highest emission contained within the authorized bandwidth as follows:

- (i) On any frequency from the center of the authorized bandwidth f_0 to 5.625 kHz removed from f_0 : Zero dB.
- (ii) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 5.625 kHz but no more than 12.5 kHz: at least $7.27(f_d - 2.88)$ dB.
- (iii) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 12.5 kHz: at least 50 + 10 log (P) dB or 70 dB, whichever is the lesser attenuation.

(2) *Emission Mask 2* —For transmitters designed to operate with a 25 kHz channel bandwidth that are equipped with an audio low-pass filter, the power of any emission must be below the unmodulated carrier power (P) as follows:

- (i) On any frequency removed from the assigned frequency by more than 50 percent, but not more than 100 percent of the authorized bandwidth: at least 25 dB.
- (ii) On any frequency removed from the assigned frequency by more than 100 percent, but not more than 250 percent of the authorized bandwidth: at least 35 dB.
- (iii) On any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth: at least $43 + 10 \log (P)$ dB.

(3) *Emission Mask 3* —For transmitters designed to operate with a 25 kHz channel bandwidth that are not equipped with an audio low-pass filter, the power of any emission must be attenuated below the unmodulated carrier output power (P) as follows:

- (i) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 5 kHz, but not more than 10 kHz: at least $83 \log (f_d/5)$ dB.
- (ii) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 10 kHz, but not more than 250 percent of the authorized bandwidth: at least $29 \log (f_d^2 / 11)$ dB or 50 dB, whichever is the lesser attenuation.
- (iii) On any frequency removed from the center of the authorized bandwidth by more than 250 percent of the authorized bandwidth: at least $43 + 10 \log (P)$ dB.

Procedures: The Emission mask were measured conducted using a spectrum analyzer at low, mid, and hi channels.

151.820MHz

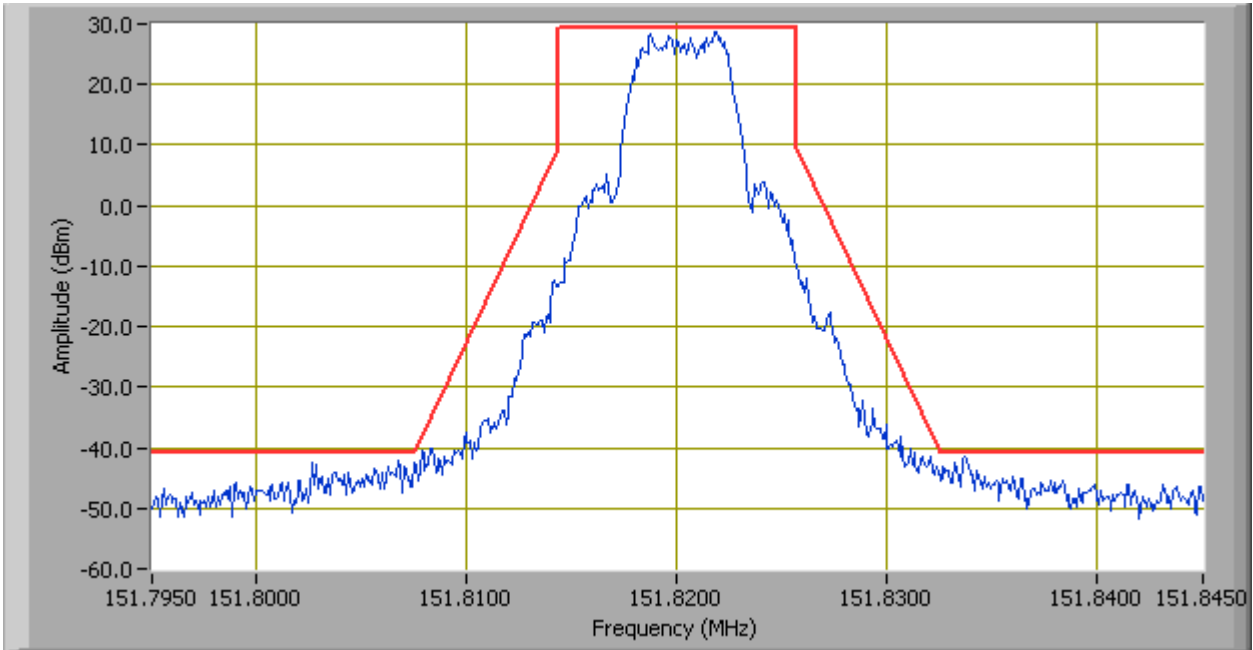


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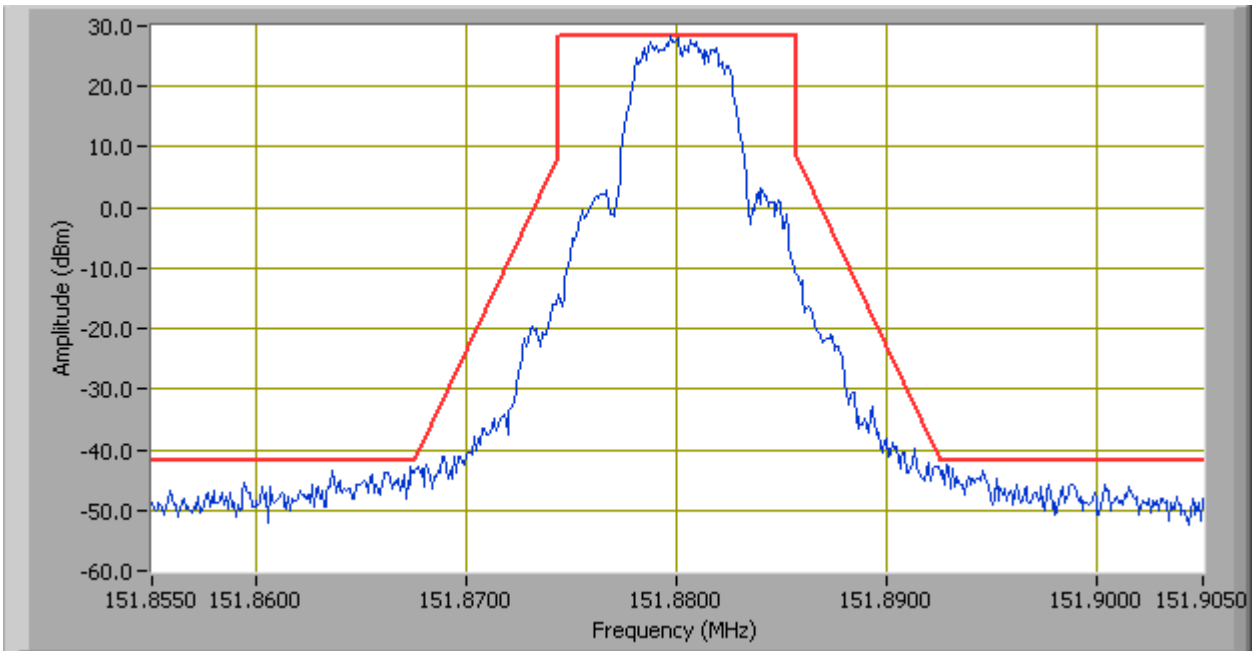
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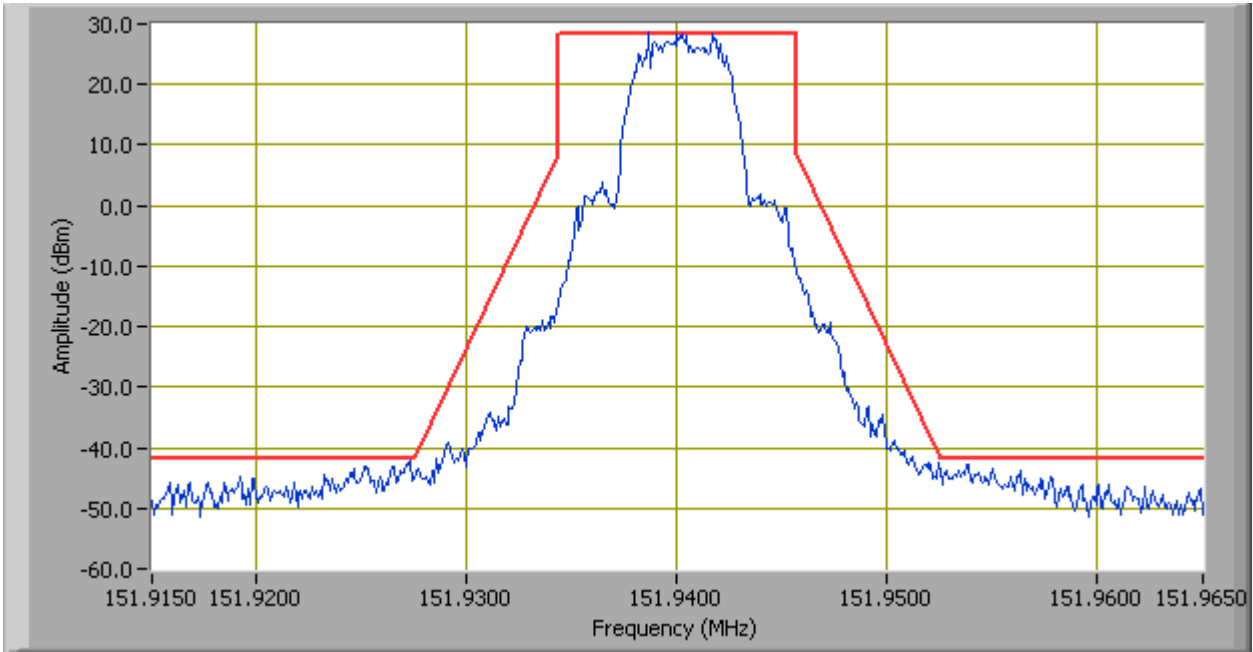
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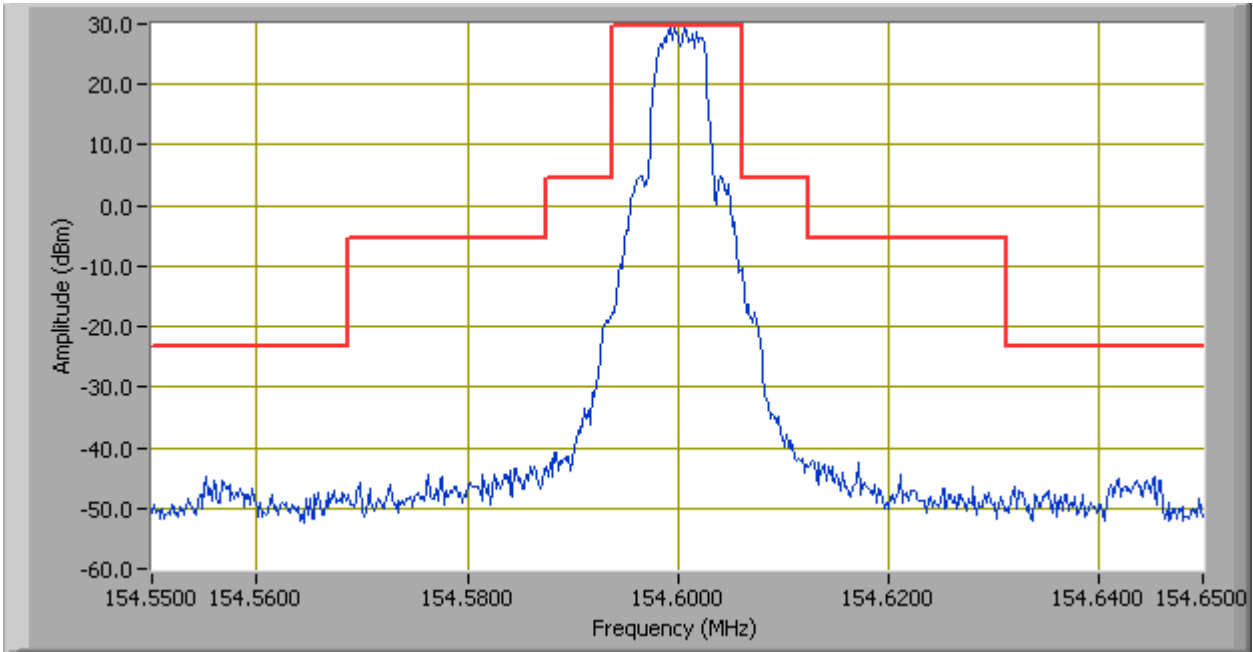
151.88MHz



151.940MHz



154.570MHz



154.600MHz

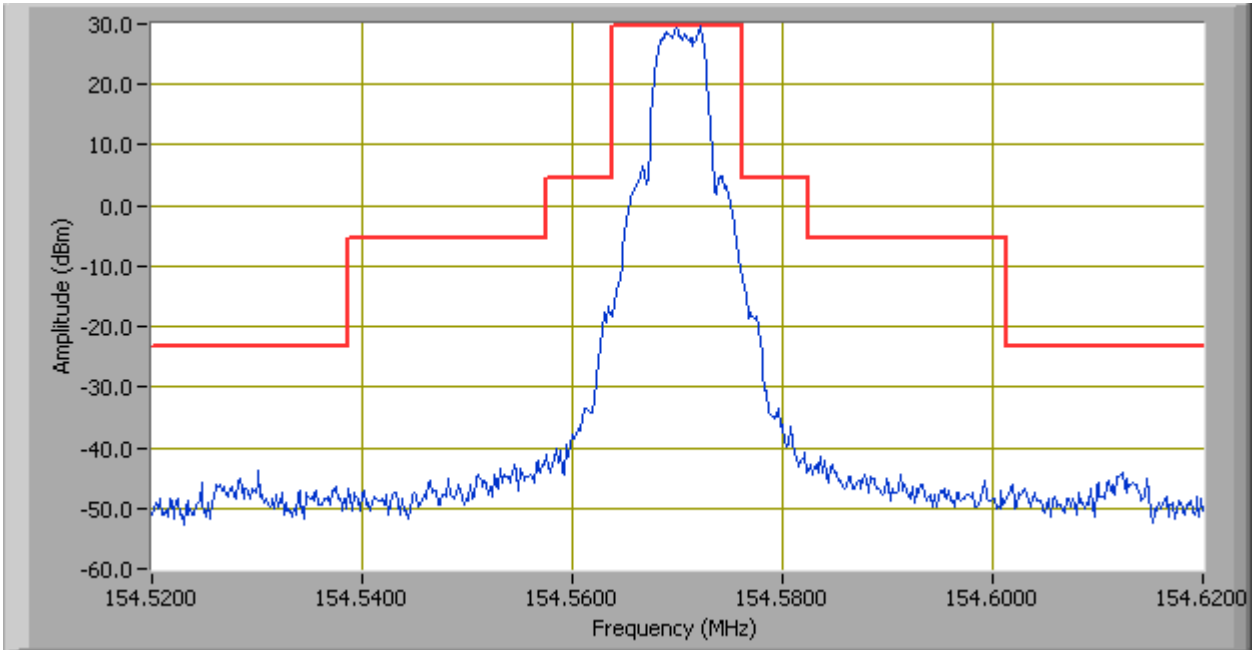


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5.5 Spurious Emissions at Antenna Terminals

1. **Conducted Measurement**
 EUT was set for low, mid, high channel with modulated mode and highest RF output power.
 The spectrum analyzer was connected to the antenna terminal.
2. **Conducted Emissions Measurement Uncertainty**
 All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2, in the range 30MHz – 40GHz is ± 1.5 dB.
3. **Environmental Conditions**

| | |
|----------------------|----------|
| Temperature | 25°C |
| Relative Humidity | 50% |
| Atmospheric Pressure | 1019mbar |
4. **Test Date :** March 09 & 17 2010
Tested By : Choon Sian Ooi

Standard Requirement: 47 CFR §95.635

For Operating channel bandwidth 151.82MHz, 151.88MHz, 151.94MHz

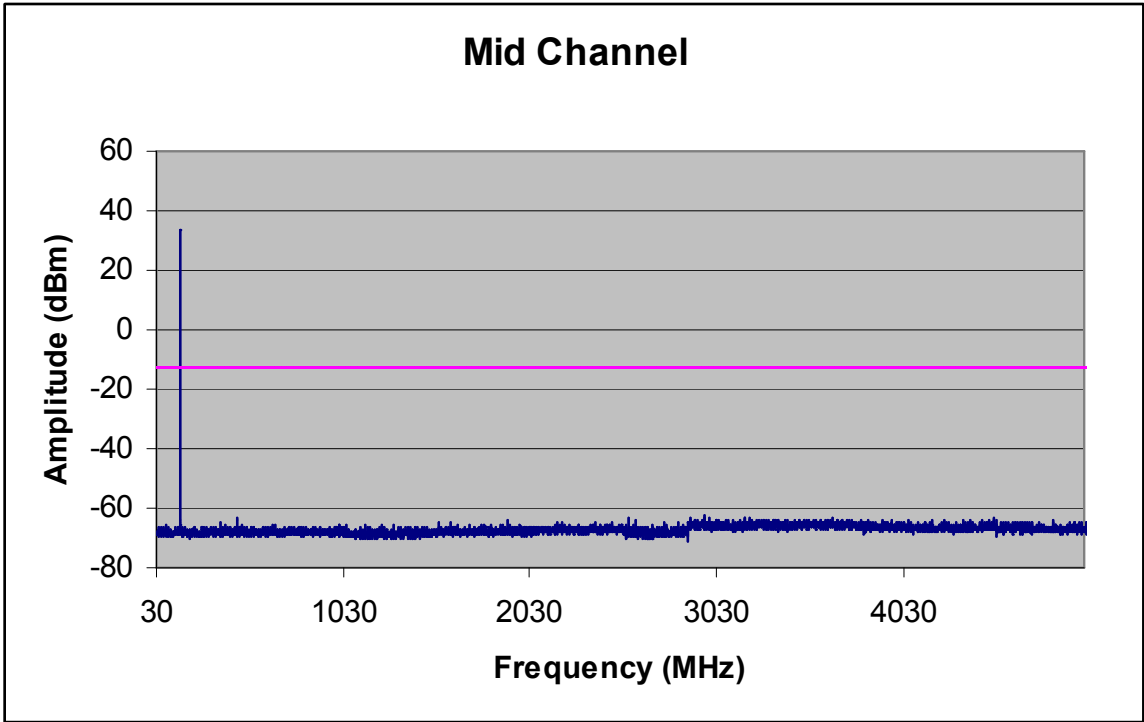
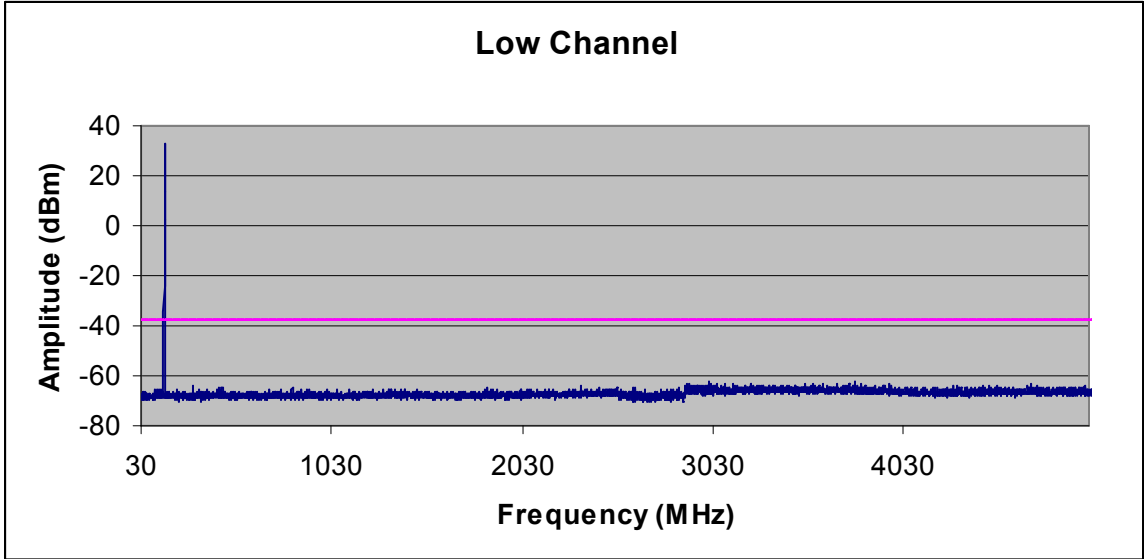
On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_{ain} kHz) of more than 12.5 kHz: At least 50 + 10 log (P) dB or 70 dB, whichever is the lesser attenuation

For Operating channel bandwidth 154.570MHz, 154.600MHz

On any frequency removed from the center of the authorized bandwidth by more than 250 percent of the authorized bandwidth: At least 43 + 10 log (P) dB.

Procedures: The spurious emission at antenna terminals measurement was taken conducted using a spectrum analyzer.

Refer to the attached plots.





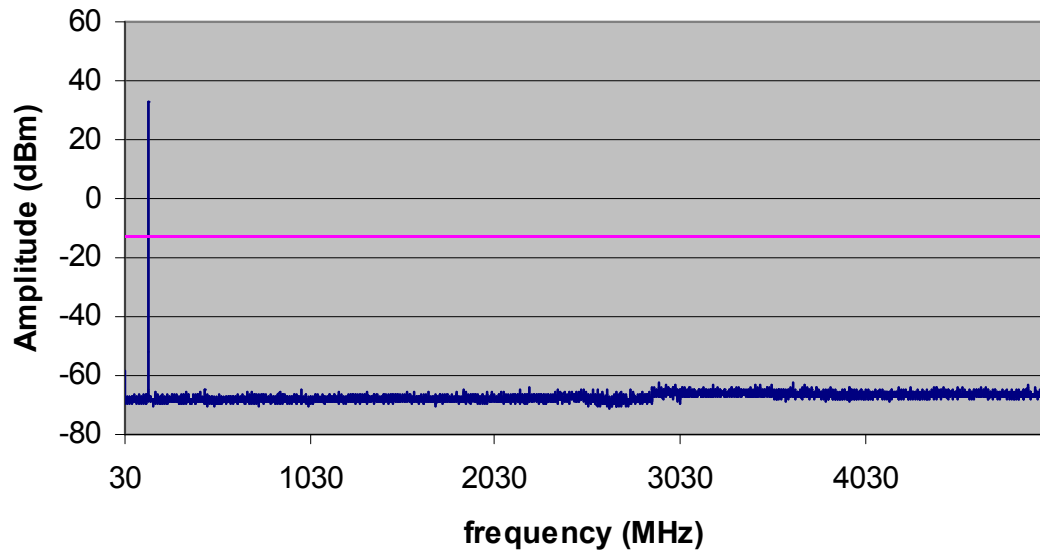
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High Channel



5.6 Frequency Stability

1. Conducted Measurement
EUT was set for mid channel.
The spectrum analyzer was connected to the antenna terminal.
Conducted Emissions Measurement Uncertainty
2. All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2, in the range 30MHz – 40GHz is ± 1.5 dB.
3. Environmental Conditions

| | |
|----------------------|----------|
| Temperature | 25°C |
| Relative Humidity | 50% |
| Atmospheric Pressure | 1019mbar |
4. Test Date : March 09 & 17 2010
Tested By : Choon Sian Ooi

Standard Requirement: 47 CFR §2.1055

Procedures: The Frequency Stability was measured conducted using a spectrum analyzer mid channels.

Note: The limit is 5.0ppm

Test Result: Pass

Frequency Stability versus Temperature: The Frequency tolerance of the carrier signal shall be maintained within $\pm 0.01\%$ of the operating frequency over a temperature variation of -20°C to $+50^{\circ}\text{C}$ at normal supply voltage.

Reference Frequency: 154.57MHz at -30°C and $+60^{\circ}\text{C}$

| Temperature ($^{\circ}\text{C}$) | Measured Freq. (MHz) | Freq. Drift (Hz) | Freq. Deviation (ppm) | Pass/Fail |
|---------------------------------------|-------------------------|---------------------|--------------------------|-----------|
| 60 | 154.57019 | 190 | < 5 | Pass |
| 50 | 154.57017 | 170 | < 5 | Pass |
| 40 | 154.57016 | 160 | < 5 | Pass |
| 30 | 154.57015 | 150 | < 5 | Pass |
| 20 | Reference | | | |
| 10 | 154.56988 | -120 | < 5 | Pass |
| 0 | 154.56987 | -130 | < 5 | Pass |
| -10 | 154.56985 | -150 | < 5 | Pass |
| -20 | 154.56983 | -170 | < 5 | Pass |
| -30 | 154.56982 | -180 | < 5 | Pass |

Table 8

Frequency Stability versus Input Voltage: The Frequency tolerance of the carrier signal shall be maintained within $\pm 0.01\%$, the frequency of the transmitter was measured at 85% and at 115% of the rated power supply voltage at 20°C environmental temperature.

Carrier Frequency: 154.57MHz at 30°C at 12.5VDC

| Measured Voltage $\pm 15\%$ of nominal (DC) | Measured Freq. (MHz) | Freq. Drift (Hz) | Freq. Deviation (Limit: 0.01%) | Pass/Fail |
|---|-------------------------|---------------------|-----------------------------------|-----------|
| 10.625 | 154.56987 | -130 | < 5 | Pass |
| 13.375 | 154.56985 | -150 | < 5 | Pass |

Table 9

5.7 Field Strength of spurious, Radiation (Transmitter)

- 1. Radiated Measurement
 EUT was set for low, mid, high channel with modulated mode and highest RF output power.
 The spectrum analyzer was connected to the antenna terminal.
- 2. Radiated Emissions Measurement Uncertainty
 All test measurements carried out are traceable to national standards. The uncertainty of the measurement at a confidence level of approximately 95% (in the case where distributions are normal), with a coverage factor of 2, in the range 30MHz – 1GHz & 1GHz above (3m & 10m) is +/-6dB.
- 3. Environmental Conditions

| | |
|----------------------|-------------|
| Temperature | 23°C - 25°C |
| Relative Humidity | 50% |
| Atmospheric Pressure | 1019mbar |
- 4. Test Date : March 09 & 17 2010
 Tested By : Choon Sian Ooi

Standard Requirement : 47 CFR §95.635

Except as indicated elsewhere in this part, transmitters used in the radio services governed by this part must comply with the emission masks outlined in this section. Unless otherwise stated, per paragraphs (d)(4), (e)(4), and (m) of this section, measurements of emission power can be expressed in either peak or average values provided that emission powers are expressed with the same parameters used to specify the unmodulated transmitter carrier power. For transmitters that do not produce a full power unmodulated carrier, reference to the unmodulated transmitter carrier power refers to the total power contained in the channel bandwidth. Unless indicated elsewhere in this part, the table in this section specifies the emission masks for equipment operating in the frequency bands governed under this part.

Procedures: The EUT was set to transmit at the highest output power. The EUT was set to transmit at mid channel. Note that setting the channel other than mid, the spurious emissions are the same.

Test Result: Pass

**SIEMIC, INC.**

Accessing global markets

Title: RF Test Report of Raveon Technologies Corporation
Model : RV-M7-VM
To FCC 95J 2010

Serial# SL10020501-RTC-001 (RV-M7-VM)
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| Frequency(MHz) | Azimuth | Antenna Polarity | Antenna Height (cm) | ERP (dBm) | ERP Limit (dBm) | Margin (dB) |
|----------------|---------|------------------|---------------------|-----------|-----------------|-------------|
| 399.67 | 243.00 | V | 103.00 | -50.16 | -13.00 | -37.16 |
| 455.45 | 164.00 | H | 101.00 | -34.63 | -13.00 | -21.63 |
| 303.64 | 116.00 | H | 101.00 | -35.53 | -13.00 | -22.53 |
| 910.67 | 143.00 | H | 176.00 | -52.02 | -13.00 | -39.02 |
| 189.62 | 39.00 | H | 248.00 | -61.73 | -13.00 | -48.73 |
| 607.28 | 123.00 | V | 117.00 | -48.07 | -13.00 | -35.07 |

Annex A. TEST INSTRUMENT & METHOD

Annex A.i. TEST INSTRUMENTATION & GENERAL PROCEDURES

| Instrument | Model | Calibration Due |
|--------------------------------|---------|-----------------|
| AC Conducted Emissions | | |
| R&S EMI Test Receiver | ESIB40 | 04/25/2010 |
| R&S LISN | ESH2-Z5 | 04/24/2010 |
| CHASE LISN | MN2050B | 04/24/2010 |
| Radiated Emissions | | |
| Spectrum Analyzer | 8564E | 04/26/2010 |
| EMI Receiver | ESIB 40 | 04/25/2010 |
| R&S LISN | ESH2-Z5 | 04/24/2010 |
| CHASE LISN | MN2050B | 04/24/2010 |
| Antenna(1 ~18GHz) | 3115 | 04/01/2010 |
| Antenna (30MHz~2GHz) | JB1 | 04/01/2010 |
| Chamber | 3m | 04/18/2010 |
| Pre-Amplifier(1 ~ 26GHz) | 8449 | 04/24/2010 |
| Horn Antenna (18~40GHz) | AH-840 | 03/19/2010 |
| Microwave Pre-Amp (18~40GHz) | PA-840 | 03/19/2010 |
| Frequency Stability | | |
| R&S EMI Receiver | ESIB 40 | 04/25/2010 |
| TestEquity Environment Chamber | 1007H | 01/24/2011 |

Note: * - Functional Verification

Annex A.ii. CONDUCTED EMISSIONS TEST DESCRIPTION

Test Set-up

1. The EUT and supporting equipment were set up in accordance with the requirements of the standard on top of a 1.5m x 1m x 0.8m high, non-metallic table, as shown in Annex B.
2. The power supply for the EUT was fed through a 50Ω/50μH EUT LISN, connected to filtered mains.
3. The RF OUT of the EUT LISN was connected to the EMI test receiver via a low-loss coaxial cable.
4. All other supporting equipments were powered separately from another main supply.

Test Method

1. The EUT was switched on and allowed to warm up to its normal operating condition.
2. A scan was made on the NEUTRAL line (for AC mains) or Earth line (for DC power) over the required frequency range using an EMI test receiver.
3. High peaks, relative to the limit line, were then selected.
4. The EMI test receiver was then tuned to the selected frequencies and the necessary measurements made with a receiver bandwidth setting of 10 KHz. For FCC tests, only Quasi-peak measurements were made; while for CISPR/EN tests, both Quasi-peak and Average measurements were made.
5. Steps 2 to 4 were then repeated for the LIVE line (for AC mains) or DC line (for DC power).

Sample Calculation Example

At 20 MHz limit = 250 μV = 47.96 dBμV

Transducer factor of LISN, pulse limiter & cable loss at 20 MHz = 11.20 dB

Q-P reading obtained directly from EMI Receiver = 40.00 dBμV
(Calibrated for system losses)

Therefore, Q-P margin = 47.96 – 40.00 = 7.96 i.e. **7.96 dB below limit**

Annex A. iii RADIATED EMISSIONS TEST DESCRIPTION

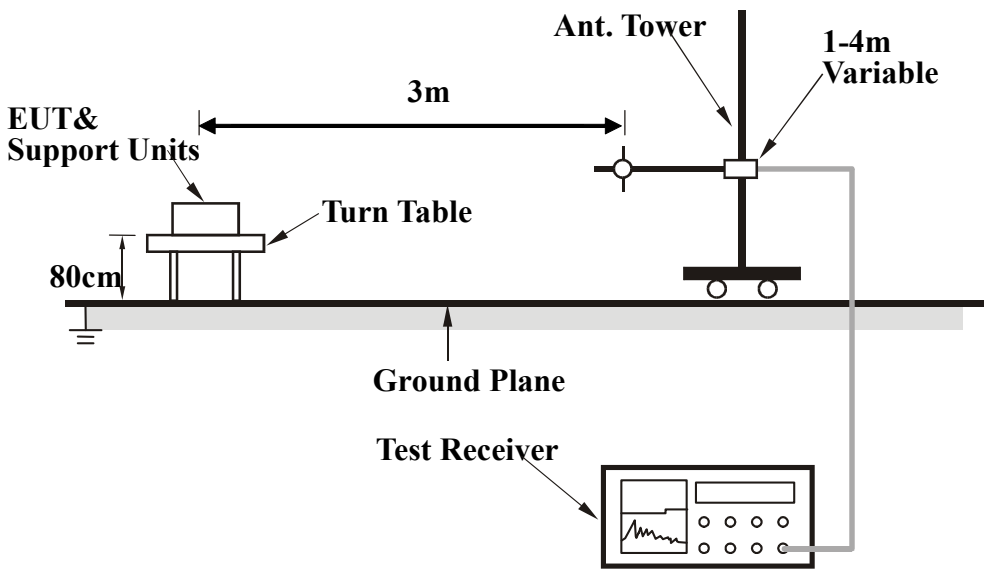
EUT Characterisation

EUT characterisation, over the frequency range from 30MHz to 10th Harmonic , was done in order to minimise radiated emissions testing time while still maintaining high confidence in the test results.

The EUT was placed in the chamber, at a height of about 0.8m on a turntable. Its radiated emissions frequency profile was observed, using a spectrum analyzer /receiver with the appropriate broadband antenna placed 3m away from the EUT. Radiated emissions from the EUT were maximised by rotating the turntable manually, changing the antenna polarisation and manipulating the EUT cables while observing the frequency profile on the spectrum analyzer / receiver. Frequency points at which maximum emissions occurred, clock frequencies and operating frequencies were then noted for the formal radiated emissions test at the Open Area Test Site (OATS).

Test Set-up

1. The EUT and supporting equipment were set up in accordance with the requirements of the standard on top of a 1.5m X 1.0m X 0.8m high, non-metallic table.
2. The filtered power supply for the EUT and supporting equipment were tapped from the appropriate power sockets located on the turntable.
3. The relevant broadband antenna was set at the required test distance away from the EUT and supporting equipment boundary.



Test Method

The following procedure was performed to determine the maximum emission axis of EUT:

1. With the receiving antenna is H polarization, rotate the EUT in turns with three orthogonal axes to determine the axis of maximum emission.
2. With the receiving antenna is V polarization, rotate the EUT in turns with three orthogonal axes to determine the axis of maximum emission.
3. Compare the results derived from above two steps. So, the axis of maximum emission from EUT was determined and the configuration was used to perform the final measurement.

Final Radiated Emission Measurement

1. Setup the configuration according to figure 1. Turn on EUT and make sure that it is in normal function.
2. For emission frequencies measured below 1 GHz, a pre-scan is performed in a shielded chamber to determine the accurate frequencies of higher emissions will be checked on a open test site. As the same purpose, for emission frequencies measured above 1 GHz, a pre-scan also be performed with a 1 meter measuring distance before final test.
3. For emission frequencies measured below and above 1 GHz, set the spectrum analyzer on a 100 kHz and 1 MHz resolution bandwidth respectively for each frequency measured in step 2.
4. The search antenna is to be raised and lowered over a range from 1 to 4 meters in horizontally polarized orientation. Position the highness when the highest value is indicated on spectrum analyzer, then change the orientation of EUT on test table over a range from 0 ° to 360 ° with a speed as slow as possible, and keep the azimuth that highest emission is indicated on the spectrum analyzer. Vary the antenna position again and record the highest value as a final reading.
5. Repeat step 4 until all frequencies need to be measured was complete.
6. Repeat step 5 with search antenna in vertical polarized orientations.

During the radiated emission test, the Spectrum Analyzer was set with the following configurations:

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

Sample Calculation Example

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. For the limit is employed average value, therefore the peak value can be transferred to average value by subtracting the duty factor. The basic equation with a sample calculation is as follows:

$$\text{Peak} = \text{Reading} + \text{Corrected Factor}$$

where

$$\text{Corr. Factor} = \text{Antenna Factor} + \text{Cable Factor} - \text{Amplifier Gain (if any)}$$

And the average value is

$$\text{Average} = \text{Peak Value} + \text{Duty Factor or}$$

$$\text{Set RBW} = 1\text{MHz, VBW} = 10\text{Hz.}$$

Note:

If the measured frequencies are fall in the restricted frequency band, the limit employed must be quasi peak value when frequencies are below or equal to 1 GHz. And the measuring instrument is set to quasi peak detector function.

Annex B EUT AND TEST SETUP PHOTOGRAPHS

Please see the attachment

Annex C. TEST SETUP AND SUPPORTING EQUIPMENT

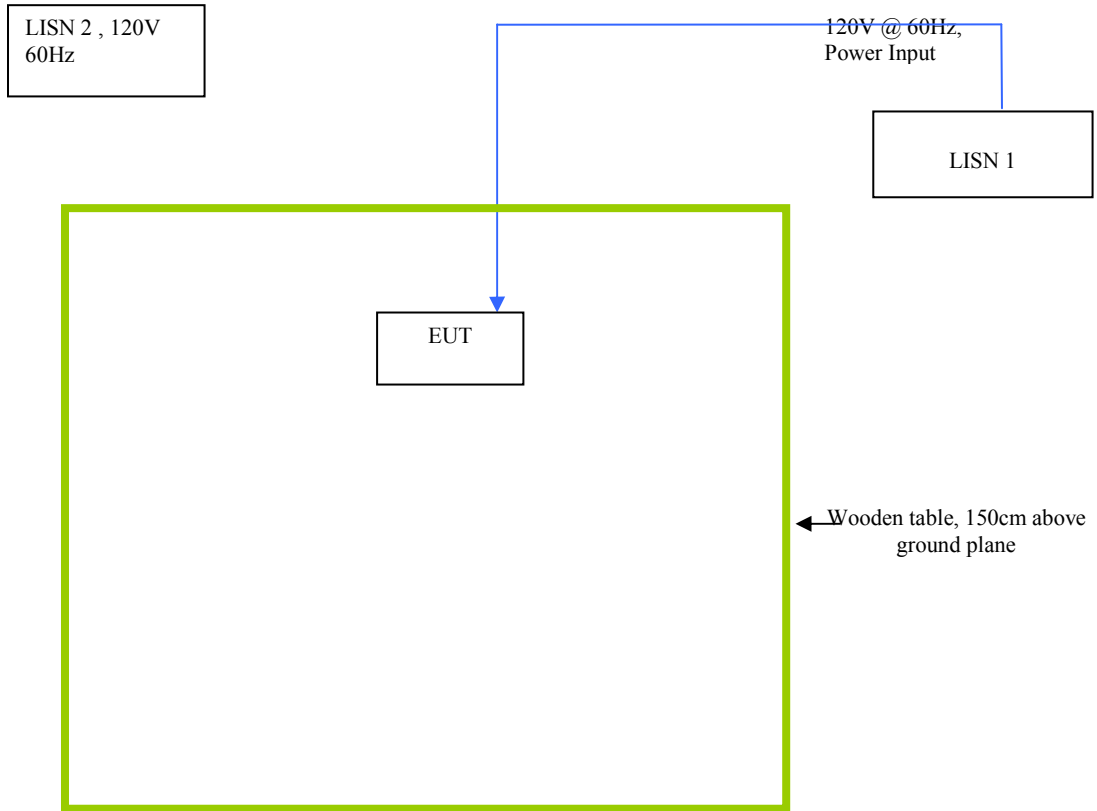
EUT TEST CONDITIONS

Annex C. i. SUPPORTING EQUIPMENT DESCRIPTION

The following is a description of supporting equipment and details of cables used with the EUT.

| Equipment Description (Including Brand Name) | Model & Serial Number | Cable Description (List Length, Type & Purpose) |
|---|-----------------------|--|
| PC Laptop / DELL | Latitude DS520 | Serial Cable , <1 meter From PC Laptop to EUT |

Block Configuration Diagram for Radiated Emission



Block Configuration Diagram for Conducted Emission

N/A

Annex C.ii. EUT OPERATING CONDITIONS

The following is the description of how the EUT is exercised during testing.

| Test | Description Of Operation |
|------------------|--|
| Emissions | The radio was set to constant transmitting mode in order to simulate worst case. |



SIEMIC, INC.

Accessing global markets

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Annex D USER MANUAL, BLOCK & CIRCUIT DIAGRAM

Please see attachment

Annex E. SIEMIC ACCREDITATION CERTIFICATES

SIEMIC ACCREDITATION DETAILS: A2LA Certificate Number: 2742.01




**THE AMERICAN ASSOCIATION FOR
LABORATORY ACCREDITATION**

ACCREDITED LABORATORY

A2LA has accredited
SIEMIC LABORATORIES
 San Jose, CA

for technical competence in the field of
Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAP Conventions dated 18 June 2005).

Presented this 11th day of July 2008.




 President
 For the Accreditation Council
 Certificate Number 2742.01
 Valid to September 30, 2010

For the tests or types of tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.



**THE AMERICAN ASSOCIATION FOR
LABORATORY ACCREDITATION**

ACCREDITED PRODUCT CERTIFICATION BODY

A2LA has accredited
SIEMIC INC.
 San Jose, CA

for technical competence as a
Product Certification Body

This product certification body is accredited in accordance with the recognized International Standard ISO/IEC Guide 65:1996 General requirements for bodies operating product certification systems. This accreditation demonstrates technical competence for a defined scope and the operation of a quality management system for a Telecommunications Certification Body (TCB) meeting FCC (U.S.), IDA (Singapore) and IC (Canada) requirements.

Presented this 9th day of January 2009.




 President
 For the Accreditation Council
 Certificate Number: 2742.02
 Valid to: September 30, 2010

For the product certification schemes to which this accreditation applies, please refer to the certification body's Scope of Accreditation.



SCOPE OF ACCREDITATION TO ISO/IEC GUIDE 65:1996

SIEMIC INC.
2206 Ringwood Ave.
San Jose, CA 95131
Mr. Snell Leong (Authorized Representative) Phone: 408 526 1188
www.siemic.com

PRODUCT CERTIFICATION CONFORMITY ASSESSMENT BODY (CAB)

Valid to: September 30, 2010

Certificate Number: 2742.02

In recognition of the successful completion of the A2LA Certification Body Accreditation Program evaluation, including the US Federal Communications Commission (FCC), Industry Canada (IC) and Singapore (IDA) requirements for the indicated types of product certifications, accreditation is granted to this organization to perform the following product certification schemes:

Economy

Scope

Federal Communication Commission - (FCC)

| | |
|------------------------------------|----------------|
| Unlicensed Radio Frequency Devices | A1, A2, A3, A4 |
| Licensed Radio Frequency Devices | B1, B2, B3, B4 |
| Telephone Terminal Equipment | C |

**Please refer to FCC TCB Program Roles and Responsibilities, v04, released February 14, 2008 detailing scopes, roles and responsibilities. <http://www.fcc.gov/oet/ea/FCC-Overview-TCB-Program.pdf>*

Industry Canada - (IC)

Radio All Radio Standards Specifications (RSS) in Category I Equipment Standards List Radio

**Please refer to Industry Canada (IC) website at: http://www.ic.gc.ca/epic/site/smt-gst.nsf/en/h_sf01342e.html*

IDA – Singapore

Line Terminal Equipment All Technical Specifications for Line Terminal Equipment – Table 1 of IDA MRA Recognition Scheme: 2008, Annex 2

Radio-Communication Equipment All Technical Specifications for Radio-Communication Equipment – Table 2 of IDA MRA Recognition Scheme: 2008, Annex 2

**Please refer to Info-Communication Development Authority (IDA) Singapore website at: http://www.ida.gov.sg/doc/Policies%20and%20Regulation/Policies_and_Regulation_Level2/20060609145118/MRARecScheme.pdf*



SIEMIC, INC.

Accessing global markets

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SIEMIC ACREDITATION DETAILS: FCC Test Site Registration No. 783147

FEDERAL COMMUNICATIONS COMMISSION

**Laboratory Division
7435 Oakland Mills Road
Columbia, MD 21046**

December 20, 2007

Registration Number: 783147

SIEMIC Laboratories
2206 Ringwood Avenue,
San Jose, CA 95131

Attention: Leslie Bai

Re: Measurement facility located at San Jose
3 & 10 meter site
Date of Renewal: December 20, 2007

Dear Sir or Madam:

Your request for renewal of the registration of the subject measurement facility has been received. The information submitted has been placed in your file and the registration has been renewed. The name of your organization will remain on the list of facilities whose measurement data will be accepted in conjunction with applications for Certification under Parts 15 or 18 of the Commission's Rules. Please note that the file must be updated for any changes made to the facility and the registration must be renewed at least every three years.

Measurement facilities that have indicated that they are available to the public to perform measurement services on a fee basis may be found on the FCC website www.fcc.gov under E-Filing, OET Equipment Authorization Electronic Filing, Test Firms.

Sincerely,

Phyllis Parrish
Industry Analyst

SIEMIC ACREDITATION DETAILS: Industry of Canada CAB ID : US0160



UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899

March 4, 2009

Mr. Leslie Bai
SIEMIC, Inc.
2206 Ringwood Avenue
San Jose, CA 95131

Dear Mr. Bai:

NIST is pleased to inform you that your laboratory has been recognized by Industry Canada (IC), under the Asia Pacific Economic Cooperation for Telecommunications Equipment Mutual Recognition Arrangement (APEC Tel MRA). Your laboratory is now designated to act as a Conformity Assessment Body (CAB) under Appendix B, **Phase I** Procedures, of the APEC Tel MRA. The pertinent information about your laboratory's designation is as follows:

CAB Name: SIEMIC, Inc.
Physical Location: 2206 Ringwood Avenue, San Jose, CA 95131 USA
Identification No.: US0160
Recognized Scope: CS-03 Part I, II, V, VI, VII and VIII

You may submit test data to IC to verify that the equipment to be imported into Canada satisfies the applicable requirements. The designation of your organization will remain in force as long as its accreditation for the designated scope remains valid and comply with the designation requirements.

Recognized CABs are listed on the NIST website at <http://ts.nist.gov/mra>. Please contact Ms. Ramona Saar at (301) 975-5521 or ramona.saar@nist.gov if you have any questions.

Sincerely,

David F. Alderman
Group Leader, Standards Coordination and Conformity Group
Standards Services Division

Enclosure

cc: CAB Program Manager



SIEMIC ACREDITATION DETAILS: Industry of Canada Test Site Registration No. 4842-1



May 23rd, 2008

OUR FILE: 46405-4842
 Submission No: 126429

Siemic Inc.
 2206 Ringwood Ave.
 San Jose CA 95131
 USA

Attention: Leslie Bai

Dear Sir/Madame:

The Bureau has received your application for the registration / renewal of a 3/10m OATS. Be advised that the information received was satisfactory to Industry Canada. The following number(s) is now associated to the site(s) for which registration / renewal was sought (**4842A-1**). Please reference the appropriate site number in the body of test reports containing measurements performed on the site. In addition, please be informed that the Bureau is now utilizing a **new site numbering scheme** in order to simplify the electronic filing process. Our goal is to reduce the number of secondary codes associated to one particular company. The following changes have been made to your record.

- Your primary code is: **4842**
- The company number associated to the site(s) located at the above address is: **4842A**
- The table below is a summary of the changes made to the unique site registration number(s):

| New Site Number | Obsolete Site Number | Description of Site | Expiry Date (YYYY-MM-DD) |
|-----------------|----------------------|---------------------|--------------------------|
| 4842A-1 | 4842-1 | 3m Chamber | 2010-05-23 |

Furthermore, to obtain or renew a unique site number, the applicant shall demonstrate that the site has been accredited to ANSI C63.4-2003 or later. A scope of accreditation indicating the accreditation by a recognized accreditation body to ANSI C63.4-2003 shall be accepted. Please indicate in a letter the previous assigned site number if applicable and the type of site (example: 3 meter OATS or 3 meter chamber). If the test facility is not accredited to ANSI C63.4-2003 or later, the test facility shall submit test data demonstrating full compliance with the ANSI standard. The Bureau will evaluate the filing to determine if recognition shall be granted.

The frequency for re-validation of the test site and the information that is required to be filed or retained by the testing party shall comply with the requirements established by the accrediting organization. However, in all cases, test site re-validation shall occur on an interval not to exceed two years. There is no fee or form associated with an OATS filing. OATS submissions are encouraged to be submitted electronically to the Bureau using the following URL:
http://strategis.ie.gc.ca/epic/internet/inceb-bhst.nsf/en/h_t00052c.html.

If you have any questions, you may contact the Bureau by e-mail at certification.bureau@ie.gc.ca
 Please reference our file and submission number above for all correspondence.

Yours sincerely,



S. Prudx
 Test & Measurement Specialist
 Certification and Engineering Bureau
 3701 Carling Ave., Building 94
 Ottawa, Ontario K2H 8S2



SIEMIC, INC.

Accessing global markets

Title: RF Test Report of Raveon Technologies Corporation
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SIEMIC ACREDITATION DETAILS: FCC DOC CAB Recognition : US1109

FEDERAL COMMUNICATIONS COMMISSION

**Laboratory Division
7435 Oakland Mills Road
Columbia, MD 21046**

August 28, 2008

Siemic Laboratories
2206 Ringwood Ave.,
San Jose, CA 95131

Attention: Leslie Bai

Re: Accreditation of Siemic Laboratories
Designation Number: US1109
Test Firm Registration #: 540430

Dear Sir or Madam:

We have been notified by American Association for Laboratory Accreditation that Siemic Laboratories has been accredited as a Conformity Assessment Body (CAB).

At this time Siemic Laboratories is hereby designated to perform compliance testing on equipment subject to Declaration Of Conformity (DOC) and Certification under Parts 15 and 18 of the Commission's Rules.

This designation will expire upon expiration of the accreditation or notification of withdrawal of designation.

Sincerely,

George Tannahill
Electronics Engineer

SIEMIC ACREDITATION DETAILS: Australia CAB ID : US0160



UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899-

November 20, 2008

Mr. Leslie Bai
SIEMIC, Inc.
2206 Ringwood Avenue
San Jose, CA 95131

Dear Mr. Bai:

NIST is pleased to inform you that your laboratory has been recognized by the Australian Communications and Media Authority (ACMA) under the Asia Pacific Economic Cooperation for Telecommunications Equipment Mutual Recognition Arrangement (APEC Tel MRA). Your laboratory is now designated to act as a Conformity Assessment Body (CAB) under Appendix B, **Phase I** Procedures, of the APEC Tel MRA. The pertinent information about your laboratory's designation is as follows:

CAB Name: Siemic, Inc.
Physical Location: 2206 Ringwood Avenue, San Jose, CA 95131
Identification No.: US0160
Recognized Scope: EMC: AS/NZS 4251.1 (until 5/31/2009), AS/NZS 4251.2 (until 5/31/2009), AS/NZS CISPR 11, AS/NZS CISPR 14.1, AS/NZS CISPR 22, AS/NZS 61000.6.3, AS/NZS 61000.6.4
Radiocommunications: AS/NZS 4281, AS/NZS 4268, AS/NZS 4280.1, AS/NZS 4280.2, AS/NZS 4295, AS/NZS 4582, AS/NZS 4583, AS/NZS 4769.1, AS/NZS 4769.2, AS/NZS 4770, AS/NZS 4771
Telecommunications: AS/ACIF S002:05, AS/ACIF S003:06, AS/ACIF S004:06, AS/ACIF S006:01, AS/ACIF S016:01, AS/ACIF S031:01, AS/ACIF S038:01, AS/ACIF S040:01, AS/ACIF S041:05, AS/ACIF S043.2:06, AS/NZS 60950.1

You may submit test data to ACMA to verify that the equipment to be imported into Australia satisfies the applicable requirements. The designation of your organization will remain in force as long as its accreditation for the designated scope remains valid and comply with the designation requirements. Recognized CABs are listed on the NIST website at <http://ts.nist.gov/mra>. Please contact Ms. Ramona Saar, at (301) 975-5521 or ramona.saar@nist.gov if you have questions.

Sincerely,

David F. Alderman
Group Leader, Standards Coordination and Conformity Group
Standards Services Division

Enclosure

cc: Snell Leong, Siemic, Inc.; Ramona Saar, NIST



Title: RF Test Report of Raveon Technologies Corporation
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SIEMIC ACREDITATION DETAILS: Korea CAB ID: US0160



UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899

October 1, 2008

Mr. Leslie Bai
SIEMIC, Inc.
2206 Ringwood Avenue
San Jose, CA 95131

Dear Mr. Bai:

NIST is pleased to inform you that your laboratory has been recognized by the Radio Research Agency (RRA) Korea Communications Commission (KCC) under the Asia Pacific Economic Cooperation for Telecommunications Equipment Mutual Recognition Arrangement (APEC Tel MRA). Your laboratory is now designated to act as a Conformity Assessment Body (CAB) under Appendix B, **Phase I** Procedures, of the APEC Tel MRA. The pertinent information about your laboratory's designation is as follows:

CAB Name: SIEMIC, Inc.
Physical Location: 2206 Ringwood Avenue, San Jose, CA 95131
Identification No.: US0160
Recognized Scope: **EMI:** KCC Notice 2008-39, RRL Notice 2008-3: CA Procedures for EMI
KN22: Test Method for EMI
EMS: KCC Notice 2008-38, RRL Notice 2008-4: CA Procedures for EMS
KN24, KN-61000-4-2, -4-3, -4-4, -4-5, -4-6, -4-8, -4-11: Test Method for EMS
Wireless: RRL Notice 2008-26, RRL Notice 2008-2, RRL Notice 2008-10,
RRL Notice 2007-49, RRL Notice 2007-20, RRL Notice 2007-21,
RRL Notice 2007-80, RRL Notice 2004-68
Wired: President Notice 20664, RRL Notice 2007-30,
RRL Notice 2008-7 with attachments 1, 3, 5, 6
President Notice 20664, RRL Notice 2008-7 with attachment 4

You may submit test data to RRA/KCC to verify that the equipment to be imported into Korea satisfies the applicable requirements. The designation of your organization will remain in force as long as its accreditation for the designated scope remains valid and comply with the designation requirements.

Recognized CABs are listed on the NIST website at <http://ts.nist.gov/mra>. If you have any questions please contact Ramona Saar at (301) 975-5521 or ramona.saar@nist.gov.


Sincerely,

David F. Alderman
Group Leader, Standards Coordination and Conformity Group
Standards Services Division

Enclosure

cc: Ramona Saar

SIEMIC ACREDITATION DETAILS: Taiwan BSMI Accreditation No. SL2-IN-E-1130R



UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899

May 3, 2006

Mr. Leslie Bai
SIEMIC Laboratories
2206 Ringwood Avenue
San Jose, CA 95131


Dear Mr. Bai:

I am pleased to inform you that your laboratory has been recognized by the Chinese Taipei's Bureau of Standards, Metrology, and Inspection (BSMI) under the Asia Pacific Economic Cooperation (APEC) Mutual Recognition Arrangement (MRA). Your laboratory is now designated to act as a Conformity Assessment Body (CAB) under Appendix B, **Phase I** Procedures, of the APEC Tel MRA. You may submit test data to BSMI to verify that the equipment to be imported into Chinese Taipei satisfies the applicable requirements. The designation of your organization will remain in force as long as its accreditation for the designated scope remains valid and comply with the designation requirements. The pertinent designation information is as follows:

- BSMI number: **SL2-IN-E-1130R** (Must be applied to the test reports)
- U.S. Identification No: **US0160**
- Scope of Designation: **CNS 13438**
- Authorized signatory: **Mr. Leslie Bai**


The names of all recognized CABs will be posted on the NIST website at <http://ts.nist.gov/mra>. If you have any questions, please contact Mr. Dhillon at 301-975-5521. We appreciate your continued interest in our international conformity assessment activities.

Sincerely,



David F. Alderman
Group Leader, Standards Coordination and Conformity Group

cc: Joginder Dhillon



SIEMIC ACREDITATION DETAILS: Taiwan NCC CAB ID: US0160



UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899

November 25, 2008

Mr. Leslie Bai
SIEMIC, Inc.
2206 Ringwood Avenue
San Jose, CA 95131

Dear Mr. Bai:

NIST is pleased to inform you that your laboratory has been recognized by the National Communications Commission (NCC) for the requested scope expansion under the Asia Pacific Economic Cooperation for Telecommunications Equipment Mutual Recognition Arrangement (APEC Tel MRA). Your laboratory is designated to act as a Conformity Assessment Body (CAB) under Appendix B, **Phase I** Procedures, of the APEC Tel MRA. The pertinent information about your laboratory's designation is as follows:

CAB Name: SIEMIC, Inc.
Physical Location: 2206 Ringwood Avenue, San Jose, CA 95131
Identification No.: US0160
Current Scope: LP0002
Additional Scope: PSTN01, ADSL01, ID0002, IS6100 and CNS 14336

You may submit test data to NCC to verify that the equipment to be imported into China satisfies the applicable requirements. The designation of your organization will remain in force as long as its accreditation for the designated scope remains valid and comply with the designation requirements.

Recognized CABs are listed on the NIST website at <http://ts.nist.gov/mra>. If you have any questions please contact Ramona Saar at (301) 975-5521 or ramona.saar@nist.gov.

Sincerely,

David F. Alderman
Group Leader, Standards Coordination and Conformity Group
Standards Services Division

Enclosure

cc: Ramona Saar


NIST

SIEMIC ACREDITATION DETAILS: Mexico NOM Recognition

| | |
|--|--|
|  <p>CANIETI <small>CAMARA NACIONAL DE LA INDUSTRIA ELECTRONICA, DE TELECOMUNICACIONES E INFORMÁTICA</small></p> | <h2 style="text-align: center;">Laboratorio Valentin V. Rivero</h2> <p style="text-align: right;">México D.F. a 18 de octubre de 2006.</p> <p>LESLIE BAI DIRECTOR OF CERTIFICATION SIEMIC LABORATORIES, INC. ACCESSING GLOBAL MARKETS P R E S E N T E</p> <p>En contestación a su escrito de fecha 5 de septiembre del año en curso, le comento que estamos muy interesados en su intención de firmar un Acuerdo de Reconocimiento Mutuo, para lo cual adjunto a este escrito encontrara el Acuerdo en idioma inglés y español preferido de los cuales le pido sea revisado y en su caso corregido, para que si está de acuerdo poder firmarlo para mandarlo con las autoridades Mexicanas para su visto bueno y así poder ejercer dicho acuerdo.</p> <p>Aprovecho este escrito para mencionarle que nuestro intermediario gestor será la empresa Isabel de México, S. A. de C. V. empresa que ha colaborado durante mucho tiempo con nosotros en lo relacionado a la evaluación de la conformidad y que cuenta con amplia experiencia en la gestión de la certificación de cumplimiento con Normas Oficiales Mexicanas de producto en México.</p> <p>Me despido de usted enviándole un cordial saludo y esperando sus comentarios al Acuerdo que nos ocupa.</p> <p>Atentamente:</p> <div style="text-align: center;">  </div> <p>Ing. Faustino Sotelo González Gerente Técnico del Laboratorio de CANIETI.</p> |
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Calle 27
 Hueso Verde
 06100 México, D.F.
 Tel: 5264-0008 con 12 líneas
 Fax: 5264-0485
 www.canieti.org

SIEMIC ACREDITATION DETAILS: Hong Kong OFTA CAB ID : US0160



DEPARTMENT OF COMMERCE
UNITED STATES OF AMERICA

UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899

December 8, 2008

Mr. Leslie Bai
SIEMIC, Inc.
2206 Ringwood Avenue
San Jose, CA 95131

Dear Mr. Bai:


NIST is pleased to inform you that your laboratory has been recognized by the Office of the Telecommunications Authority (OFTA) under the Asia Pacific Economic Cooperation for Telecommunications Equipment Mutual Recognition Arrangement (APEC Tel MRA). Your laboratory is now designated to act as a Conformity Assessment Body (CAB) under Appendix B, **Phase I** Procedures, of the APEC Tel MRA. The pertinent information about your laboratory's designation is as follows:

CAB Name: SIEMIC, Inc.
Physical Location: 2206 Ringwood Avenue, San Jose, California 95131 USA
Identification No.: US0160
Recognized Scope: **Radio:** HKTA 1002, 1007, 1008, 1010, 1015, 1016, 1020, 1022, 1026, 1027, 1029, 1030, 1031, 1032, 1033, 1034, 1035, 1036, 1037, 1039, 1041, 1042, 1043, 1044, 1046, 1047, 1048, 1049, 1051
Telecom: HKTA 2011, 2012, 2013, 2014, 2017, 2018, 2022, 2024, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033

You may submit test data to OFTA to verify that the equipment to be imported into Hong Kong satisfies the applicable requirements. The designation of your organization will remain in force as long as its accreditation for the designated scope remains valid and comply with the designation requirements.

Recognized CABs are listed on the NIST website at <http://ts.nist.gov/mra>. If you have any questions please contact Ramona Saar at (301) 975-5521 or ramona.saar@nist.gov.

Sincerely,



David F. Alderman
Group Leader, Standards Coordination and Conformity Group
Standards Services Division

Enclosure

cc: Ramona Saar

NIST

SIEMIC ACREDITATION DETAILS: Australia ACMA CAB ID: US0160



UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899

November 20, 2008

Mr. Leslie Bai
SIEMIC, Inc.
2206 Ringwood Avenue
San Jose, CA 95131

Dear Mr. Bai:

NIST is pleased to inform you that your laboratory has been recognized by the Australian Communications and Media Authority (ACMA) under the Asia Pacific Economic Cooperation for Telecommunications Equipment Mutual Recognition Arrangement (APEC Tel MRA). Your laboratory is now designated to act as a Conformity Assessment Body (CAB) under Appendix B, **Phase I** Procedures, of the APEC Tel MRA. The pertinent information about your laboratory's designation is as follows:

CAB Name: Siemic, Inc.
Physical Location: 2206 Ringwood Avenue, San Jose, CA 95131
Identification No.: US0160
Recognized Scope: EMC: AS/NZS 4251.1 (until 5/31/2009), AS/NZS 4251.2 (until 5/31/2009), AS/NZS CISPR 11, AS/NZS CISPR 14.1, AS/NZS CISPR 22, AS/NZS 61000.6.3, AS/NZS 61000.6.4
Radiocommunications: AS/NZS 4281, AS/NZS 4268, AS/NZS 4280.1, AS/NZS 4280.2, AS/NZS 4295, AS/NZS 4582, AS/NZS 4583, AS/NZS 4769.1, AS/NZS 4769.2, AS/NZS 4770, AS/NZS 4771
Telecommunications: AS/ACIF S002:05, AS/ACIF S003:06, AS/ACIF S004:06, AS/ACIF S006:01, AS/ACIF S016:01, AS/ACIF S031:01, AS/ACIF S038:01, AS/ACIF S040:01, AS/ACIF S041:05, AS/ACIF S043.2:06, AS/NZS 60950.1

You may submit test data to ACMA to verify that the equipment to be imported into Australia satisfies the applicable requirements. The designation of your organization will remain in force as long as its accreditation for the designated scope remains valid and comply with the designation requirements. Recognized CABs are listed on the NIST website at <http://ts.nist.gov/mra>. Please contact Ms. Ramona Saar, at (301) 975-5521 or ramona.saar@nist.gov if you have questions.

Sincerely,

David F. Alderman
Group Leader, Standards Coordination and Conformity Group
Standards Services Division

Enclosure

cc: Snell Leong, Siemic, Inc.; Ramona Saar, NIST



SIEMIC ACREDITATION DETAILS: Australia NATA Recognition



Leslie Bai
SIEMIC, Inc.
2206 Ringwood Avenue
San Jose, CA 95131

November 4, 2008

Under Australian government legislation, the Australian Communications and Media Authority (ACMA) has determined the National Association of Testing Authorities, Australia (NATA) as an accreditation body as per Section 409(1) of the Telecommunications Act 1997 (Cth). Pursuant to Section 409(2) of the Telecommunications Act 1997 (Cth), I am pleased to advise that your laboratory has been determined as a Recognised Testing Authority (RTA).

This determination has been made on the basis of your accreditation by A2LA accreditation no. 2742.01 and the Mutual Recognition Agreement between NATA and A2LA. It is effective from 11 July 2008. RTA status applies only to the following standards and is contingent upon their continued inclusion in your laboratory's scope of accreditation.

**AS/ACIF S002, AS/ACIF S003, AS/ACIF S004,
AS/ACIF S006, AS/ACIF S016, AS/ACIF S031,
AS/ACIF S038, AS/ACIF S041 and
AS/ACIF S043.2**

As an RTA, your laboratory has the following obligations:

1. the laboratory shall continue to meet all of the accreditation criteria of A2LA;
2. the authorised representative of the laboratory shall notify NATA of changes to the staff or operations of the laboratory which would affect the performance of the tests for which the laboratory has been determined;
3. compliance of equipment shall be reported on test reports bearing the A2LA logo/endorsement.

Current information on the Australian Communications and Media Authority and regulatory requirements for telecommunications products within Australia can be obtained from the ACMA's web-site at "<http://www.acma.gov.au>". Further information about NATA may be gained by visiting "<http://www.nata.asn.au>".

Please note that AS/ACIF S040 and New Zealand standards do not form part of the RTA scheme.

Your RTA listing will appear on the NATA website shortly.

Kind Regards

Chris Norton,
Senior Scientific Officer
Measurement Science and Technology
National Association of Testing Authorities (NATA)
71-73 Flemington Road
North Melbourne Vic 3051
Australia
Ph: +61 3 9329 1633 Fx: +61 3 9326 5148
E-Mail: Christopher.Norton@nata.asn.au
Internet: www.nata.asn.au

SIEMIC ACREDITATION DETAILS: VCCI Radiated Test Site Registration No. R-3083



VCCI Council

CERTIFICATE

Company: SIEMIC Inc.

<Member No. 3081 >

Facility: SIEMIC Inc.

(Radiation 3 meter site)

Location of Facility:

2206 Ringwood Avenue, San Jose, CA 95131 USA

*This is to certify that the following measuring facility
has been registered in accordance with the Rules
for Voluntary Control Measures*

Registration No.: R-3083

Date of Registration: June 12 , 2009

This Certificate is valid until September 30 , 2010

VCCI Council



SIEMIC ACREDITATION DETAILS: VCCI Conducted (Main Port) Test Site Registration No. C-3421



VCCI Council

CERTIFICATE

Company: SIEMIC Inc.

<Member No. 3081 >

Facility: SIEMIC Inc.

(Main Ports Conducted Interference Measurement)

Location of Facility:

2206 Ringwood Avenue, San Jose, CA 95131 USA

*This is to certify that the following measuring facility
has been registered in accordance with the Rules
for Voluntary Control Measures*

Registration No.: C-3421

Date of Registration: June 12 , 2009

This Certificate is valid until September 30 , 2010

VCCI Council



SIEMIC ACREDITATION DETAILS: VCCI Conducted (Telecom Port) Test Site Registration No. T-1597



VCCI Council

CERTIFICATE

Company: SIEMIC Inc.

<Member No. 3081 >

Facility: SIEMIC Inc.

(Telecommunication Ports Conducted Interference Measurement)

Location of Facility:

2206 Ringwood Avenue, San Jose, CA 95131 USA

*This is to certify that the following measuring facility
has been registered in accordance with the Rules
for Voluntary Control Measures*

Registration No.: T-1597

Date of Registration: June 12 , 2009

This Certificate is valid until September 30 , 2010

VCCI Council

