



EMC Technologies Pty Ltd

ABN 82 057 105 549

176 Harrick Road, Keilor Park,
Victoria 3042, Australia

Ph: + 61 (0)3 9365 1000

Fax: + 61 (0)3 9331 7455

Email: sales@emctech.com.au

**RADIO REPORT FOR CERTIFICATION
to
FCC PART 15 Subpart C (Section 15.225)**

FCC ID: 2AIKG-CP6100

Test Sample: Card Processor
Model: CP6100

Client: Vix Technology

Report Number: M160508-1

Issue Date: 20 September 2016

EMC Technologies Pty Ltd reports apply only to the specific samples tested under stated test conditions. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. EMC Technologies Pty Ltd shall have no liability for any deductions, inferences or generalisations drawn by the client or others from EMC Technologies Pty Ltd issued reports. This report shall not be used to claim, constitute or imply product endorsement by EMC Technologies Pty Ltd.



Accredited for compliance with ISO/IEC 17025. The results of the test, calibrations and/or measurement included in this document are traceable to Australian/national standards. NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, calibration and inspection reports.

This document shall not be reproduced except in full.

RADIO REPORT FOR CERTIFICATION
to
FCC PART 15 Subpart C (Section 15.225)
EMC Technologies Report No.: M160508-1
Issue Date: 20 September 2016

CONTENTS

| | |
|------------|--|
| 1.0 | INTRODUCTION |
| 2.0 | GENERAL INFORMATION |
| 3.0 | TEST RESULTS |
| 3.1 | §15.203 Antenna Requirement |
| 3.2 | §15.205 Restricted Bands of Operation |
| 3.3 | §15.207 Conducted Limits |
| 3.4 | §15.209 Radiated Emission Limits; General Requirements |
| 3.5 | §15.225(a) Fundamental Field Strength |
| 3.6 | §15.225(b and c) Transmission Mask 13.110-14.010 MHz |
| 3.7 | §15.225(d) Spurious Emissions |
| 3.8 | §15.225(e) Frequency Tolerance |
| 4.0 | COMPLIANCE STATEMENT |
| 5.0 | MEASUREMENT UNCERTAINTY |



Accredited for compliance with ISO/IEC 17025. The results of the test, calibrations and/or measurement included in this document are traceable to Australian/national standards. NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, calibration and inspection reports.

This document shall not be reproduced except in full.

RADIO REPORT FOR CERTIFICATION
to
FCC PART 15 Subpart C (Section 15.225)

Report Number: M160508-1
Issue Date: 20 September 2016

Sample: Card Processor
Model: CP6100
Serial Number: Not marked
Manufacturer: Vix Technology


FCC ID: 2AIKG-CP6100
Equipment Type: Intentional Radiator (13.56 MHz Transceiver)

Tested for: Vix Technology
Address: Level 4, 50 St Georges Tce
Perth 6060, Western Australia
Phone: +61 (0)8 6180 4613
Contact: Gino Bertino
Email: gino.bertino@vixtechnology.com

Standard: FCC Part 15 – *Radio Frequency Devices*

FCC Part 15 Subpart C – *Intentional Radiators*
Section 15.225 – *Operation within the band 13.110-14.010 MHz*

Test Dates: 30 July and 4 August 2016

Test Engineers: 

Mahan Ghassempouri
Test Engineer
M.Sc. in Telecommunication

Attestation: *I hereby certify that the device(s) described herein were tested as described in this report and that the data included is that which was obtained during such testing.*

Authorised Signatory: 

Chris Zombolas
Technical Director
EMC TECHNOLOGIES PTY LTD

Issued by: EMC Technologies Pty. Ltd., 176 Harrick Road, Keilor Park, VIC 3042, Australia.
Phone : +61 3 9365 1000 **Fax:** +61 3 9331 7455 **Web:** www.emctech.com.au



Accredited for compliance with ISO/IEC 17025. The results of the test, calibrations and/or measurement included in this document are traceable to Australian/national standards. NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, calibration and inspection reports.

This document shall not be reproduced except in full.

RADIO REPORT FOR CERTIFICATION to FCC PART 15 SUBPART C (SECTION 15.225)

1.0 INTRODUCTION

Test results and procedures were performed in accordance with the following Federal Communications Commission (FCC) standards/regulations that were deemed applicable for the CP6100:

| | |
|-----------------------------|---|
| 47 CFR, Part 15, Subpart C: | Rules for intentional radiators |
| Section 15.203: | Antenna requirements |
| Section 15.205: | Restricted bands of operation |
| Section 15.209: | Radiated emission limits (General requirements) |
| Section 15.225: | Operation within the band 13.110-14.010 MHz |

The sample **complied** with the applicable requirements of 47 CFR, Part 15 Subpart C - Section 15.225.

The measurement procedure used was in accordance with ANSI C63.10: 2013. The instrumentation conformed to the requirements of ANSI C63.2: 2009.

1.1 Summary of Results

| FCC Part 15 Subpart C | Test Performed | Results |
|-----------------------|---|-----------------------|
| 15.203 | Antenna Requirement | Complied |
| 15.205 | Restricted bands of operation | Complied |
| 15.207 | Conducted Limits | Not applicable |
| 15.209 | Radiated Emissions Limits; General Requirements | Complied |
| 15.225(a) | Fundamental Field Strength | Complied |
| 15.225(b and c) | Transmission Mask 13.110-14.010 MHz | Complied |
| 15.225(d) | Spurious Emissions | Complied |
| 15.225(e) | Frequency Tolerance | Complied |
| 2.1049 | Occupied Bandwidth | 170.5 Hz |

1.2 Modifications by EMC Technologies

No modifications were performed.



Accredited for compliance with ISO/IEC 17025. The results of the test, calibrations and/or measurement included in this document are traceable to Australian/national standards. NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, calibration and inspection reports.

This document shall not be reproduced except in full.

2.0 GENERAL INFORMATION

(Information supplied by the Client)

2.1 EUT (Transmitter) Details

Wireless Radio: 13.5615 MHz
Antenna type: Integral, loop

2.2 EUT (Host) Details

Test Sample: Card Processor
Model Number: CP6100
Serial Number: Not marked
Manufacturer: Vix Technology
Supply Rating: 24 VDC
Highest operating Frequency: 400 MHz
Radio Module: CLRC663 multi-protocol NFC frontend IC

2.3 Test Configuration

The EUT was transmitting continuously during the test.

2.4 Test Facility

2.4.1 General

EMC Technologies Pty Ltd is listed by the FCC as a test laboratory able to perform compliance testing for the public. EMC Technologies is listed as an FCC part 47CFR2.948 test lab and may perform the testing required under Parts 15 and 18 – **FCC Registration Number 90560**

EMC Technologies Pty Ltd has also been accredited as a Conformity Assessment Body (CAB) by Australian Communications and Media Authority (ACMA) under the APECTEL MRA and is designated to perform compliance testing on equipment subject to Declaration of Conformity (DoC) and Certification under Parts 15 and 18 of the FCC Commission's rules – **Registration Number 494713 & Designation number AU0001.**

EMC Technologies indoor open area test site (iOATS) have been accepted by Industry Canada for the performance of radiated measurements in accordance with RSS-Gen, Issue 8 - **Industry Canada iOATS number - IC 3569B**

Measurements in this report were performed at EMC Technologies' laboratory in Keilor Park, Victoria Australia.

2.4.2 NATA Accreditation

NATA is the Australian National laboratory accreditation body and has accredited EMC Technologies to operate to the IEC/ISO17025 requirements. A major requirement for accreditation is the assessment of the company and its personnel as being technically competent in testing to the standards. This requires fully documented test procedures, continued calibration of all equipment to the National Standard at the National Measurements Institute (NMI) and an internal quality system to ISO 9002. NATA has mutual recognition agreements with the National Voluntary Laboratory Accreditation Program (NVLAP) and the American Association for Laboratory Accreditation (A²LA).

EMC Technologies is accredited in Australia by the National Association of Testing Authorities (NATA). All testing in this report has been conducted in accordance with EMC Technologies' scope of NATA accreditation.

The current full scope of accreditation can be found on the NATA website: www.nata.asn.au



Accredited for compliance with ISO/IEC 17025. The results of the test, calibrations and/or measurement included in this document are traceable to Australian/national standards. NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, calibration and inspection reports.

This document shall not be reproduced except in full.

2.5 Test Equipment Calibration

Measurement instrumentation and transducers were calibrated in accordance with the applicable standards by an independent NATA registered laboratory such as Agilent Technologies (Australia) Pty Ltd or the National Measurement Institute (NMI) or in-house. All equipment calibration is traceable to Australian national standards at the National Measurements Institute.

| Equipment Type | Make/Model/Serial Number | Last Cal. dd/mm/yy | Due Date dd/mm/yy | Cal. Interval |
|----------------|--|--------------------|-------------------|---------------|
| Chamber | Frankonia SAC-10-2 (R-139) | 8/01/2016 | 8/01/2017 | 1 Year, *1 |
| EMI Receiver | R&S ESU40 20 Hz – 40 GHz Sn: 100392 (R-140) | 19/11/2015 | 19/11/2016 | 1 Year, *2 |
| | R&S ESU40 20 Hz – 40 GHz Sn: 100182 (R-037) | 18/02/2016 | 18/02/2017 | 1 Year, *2 |
| Antennas | EMCO 6502 Active Loop 9 kHz – 30 MHz Sn. 9311-2801 (A-231) | 20/07/2015 | 20/07/2018 | 3 Year, *2 |
| | SUNOL JB6 Biconilog 30 – 6000 MHz Sn. A012312 (A-363) | 26/05/2016 | 26/05/2018 | 2 Year, *2 |
| | EMCO 3115 Double Ridge Horn 1 – 18 GHz Sn: 8908-3282 (A-004) | 15/07/2016 | 15/07/2019 | 3 Year, *1 |
| Cables | Room 12 inbuilt cable Panel 1 to 10 m (C-422) | 09/05/2016 | 09/05/2017 | 1 Year, *1 |
| | Room 12 inbuilt cable Panel 1 to 3 m (C-421) | 09/05/2016 | 09/05/2017 | 1 Year, *1 |
| | Room 12 Antenna cable (C-437) | 09/05/2016 | 09/05/2017 | 1 Year, *1 |

Note *1. Internal NATA calibration.

Note *2. External NATA / A2LA calibration



Accredited for compliance with ISO/IEC 17025. The results of the test, calibrations and/or measurement included in this document are traceable to Australian/national standards. NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, calibration and inspection reports.

This document shall not be reproduced except in full.

3.0 TEST RESULTS

3.1 §15.203 Antenna Requirement

An internal, permanently attached antenna was incorporated within the CP6100 Reader ensuring that it could not be replaced.

3.2 §15.205 Restricted Bands of Operation

The limits of §15.209 were applied across the applicable spectrum and therefore complied with the restricted band requirements. The device was exempt from the restricted band limits for the band 13.36-13.41 MHz.

3.3 §15.207 Conducted Limits

Not applicable as the EUT was DC powered from a vehicle supply and not connected directly or indirectly to an AC supply network.

3.4 §15.209 Radiated emission limits; general requirements

The general requirement limits were applied to the measurements of §15.225(d).



Accredited for compliance with ISO/IEC 17025. The results of the test, calibrations and/or measurement included in this document are traceable to Australian/national standards. NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, calibration and inspection reports.

This document shall not be reproduced except in full.

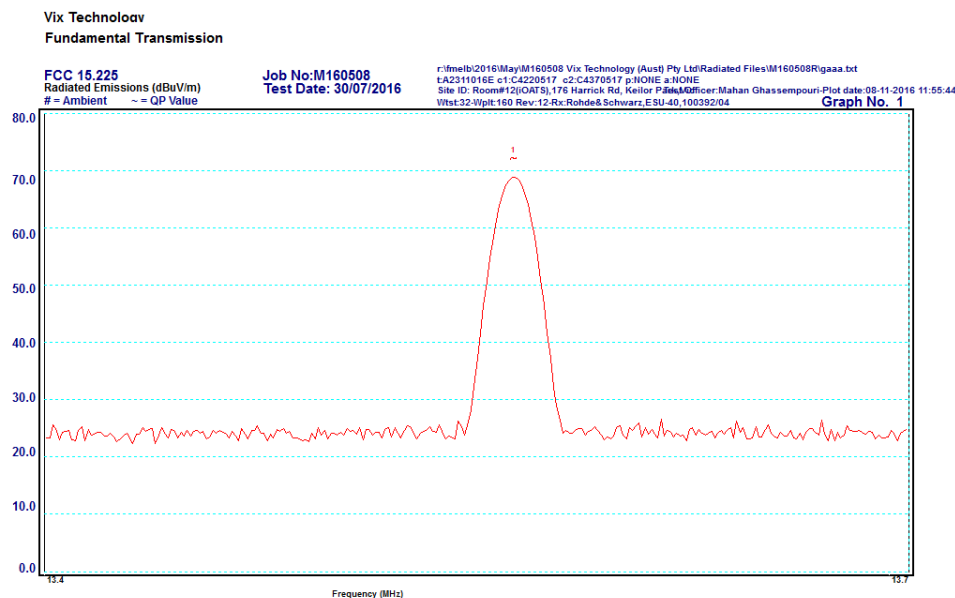
3.5 §15.225(a) Fundamental Field Strength

The field strength of the fundamental transmitted frequency was measured inside a compliant CISPR16-1-4 semi-anechoic chamber. The EUT was positioned on a test turn-table and rotated through 360° to determine the highest emissions. The measurement antenna was also varied between 1 and 4 metres height. The measurements were made with the loop antenna in three orthogonal orientations.

3.5.1 Result

All measurements were made at a distance of 10 metres. The fundamental emissions were measured using a peak detector and as the level did not exceed the limit further measurements were not made.

| Loop Antenna Orientation | Frequency MHz | E- field dBμV/m | E-field μV/m | 30 m Limit μV/m | 10 m Limit μV/m | Result |
|--------------------------|---------------|-----------------|--------------|-----------------|-----------------|----------|
| Parallel | 13.56 | 51.92 | 394 | 15,848 | 47,315 | Complied |
| Perpendicular | 13.56 | 72.13 | 4,041 | 15,848 | 47,315 | Complied |
| Horizontal | 13.56 | 70.48 | 3,342 | 15,848 | 47,315 | Complied |



3.5.2 Conclusion

The field strength of the fundamental transmitted signal complied with the limit of §15.225(a).



Accredited for compliance with ISO/IEC 17025. The results of the test, calibrations and/or measurement included in this document are traceable to Australian/national standards. NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, calibration and inspection reports.

This document shall not be reproduced except in full.

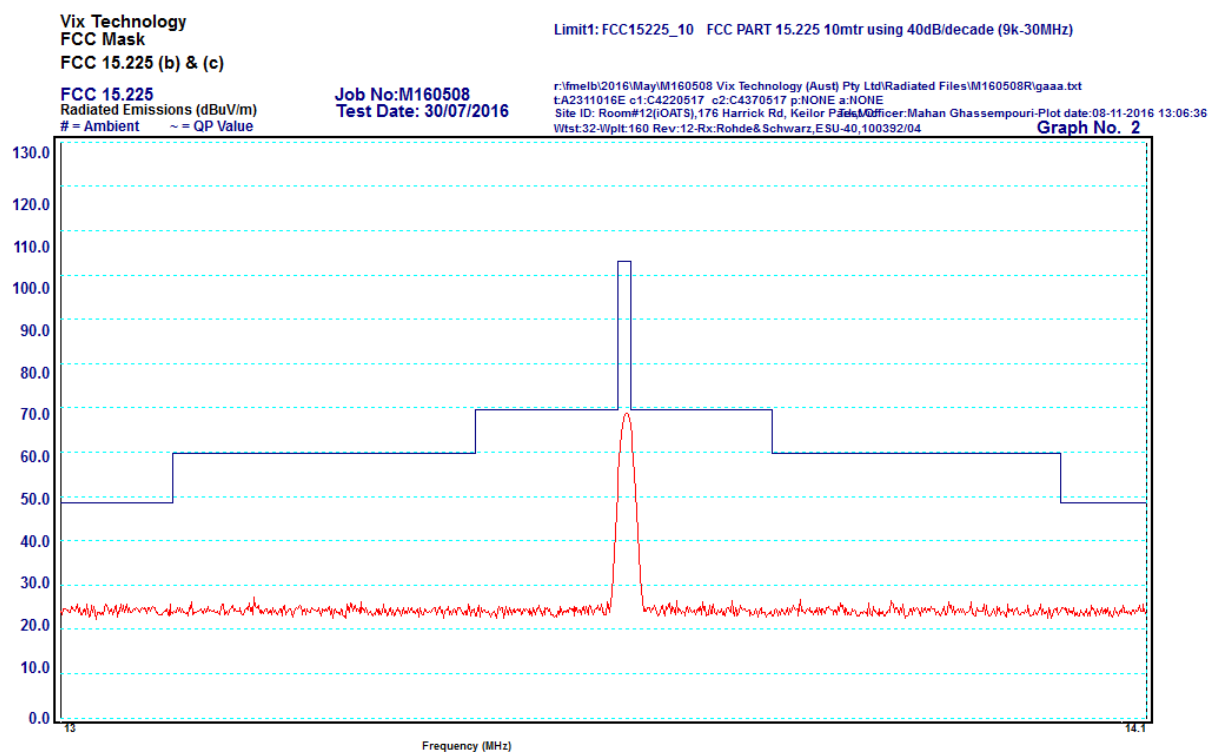
3.6 §15.225(b and c) Transmission Mask 13.110-14.010 MHz

Measurements were made at 10 metres using a 0.6 metre loop antenna. Initial investigations were made to find the EUT and measuring antenna orientations that produce the highest reading on the EMI receiver/spectrum analyser. These measurements were made at the transmit frequency, 13.56 MHz.

With the EUT and measuring antenna orientated in the position giving maximum emission measurements with a bandwidth of 9 kHz were made between 13.110 MHz and 14.010 MHz. The following limit mask applied:

| Frequency band (MHz) | Field strength limit at 30 m (µV/m) | Equivalent field strength limit at 10 m (dBµV/m) |
|----------------------|-------------------------------------|--|
| 13.110 to 13.410 | 106 | 59.6 |
| 13.410 to 13.553 | 334 | 69.6 |
| 13.553 to 13.567 | 15,848 | 103.1 |
| 13.567 to 13.710 | 334 | 69.6 |
| 13.710 to 14.010 | 106 | 59.6 |

3.6.1 Result



No transmitted signal emissions were detected in the frequency bands 13.110 to 13.410 MHz, 13.410 to 13.553 MHz, 13.567 to 13.710 MHz and 13.710 to 14.010 MHz.

3.6.2 Conclusion

The transmitted signal complied with the limit mask of §15.225(b and c).



Accredited for compliance with ISO/IEC 17025. The results of the test, calibrations and/or measurement included in this document are traceable to Australian/national standards. NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, calibration and inspection reports.

This document shall not be reproduced except in full.

3.7 §15.225(d) Spurious Emissions

Radiated EMI tests were performed in a semi-anechoic chamber compliant with CISPR16-1-4. The chamber allows a 2m x 2m x 2m test volume up to 6 GHz, at a test distance of 3 metres and 10 metres.

The test frequency range was sub-divided into smaller bands with sufficient frequency resolution to permit reliable display and identification of possible EMI peaks. Measurements in the range of 9 kHz-30 MHz were made at 10 metres distance using a 0.6 metre loop antenna. A calibrated Biconilog antenna (at 10 m distance) and horn antenna (at 3 m distance) were used for measurements in the frequency range of 30-1000 MHz and 1-2 GHz, respectively.

The EUT was slowly rotated with the spectrum analyser was set to Max-Hold. This was performed for two antenna heights. When an emission was located, it was positively identified and its maximum level found by rotating the automated turntable and by varying the antenna height. The procedure was repeated with the device orientated in three orthogonal axis to further maximise the emission.

Each significant peak was investigated with the Peak/Average Detectors. The measurement data for each frequency range was corrected for cable losses, antenna factors and preamplifier gain. This process was performed for both horizontal and vertical antenna polarisations.

3.7.1 Calculation of field strength

The field strength was calculated automatically by the software using all the pre-stored calibration data. The method of calculation is shown below:

$$E = V + AF - G + L$$

Where:

- E** = Radiated Field Strength in dBμV/m.
- V** = EMI Receiver Voltage in dBμV. (measured value)
- AF** = Antenna Factor in dB. (stored as a data array)
- G** = Preamplifier Gain in dB. (stored as a data array)
- L** = Cable loss in dB. (stored as a data array of Insertion Loss versus frequency)



Accreditation No. 5292

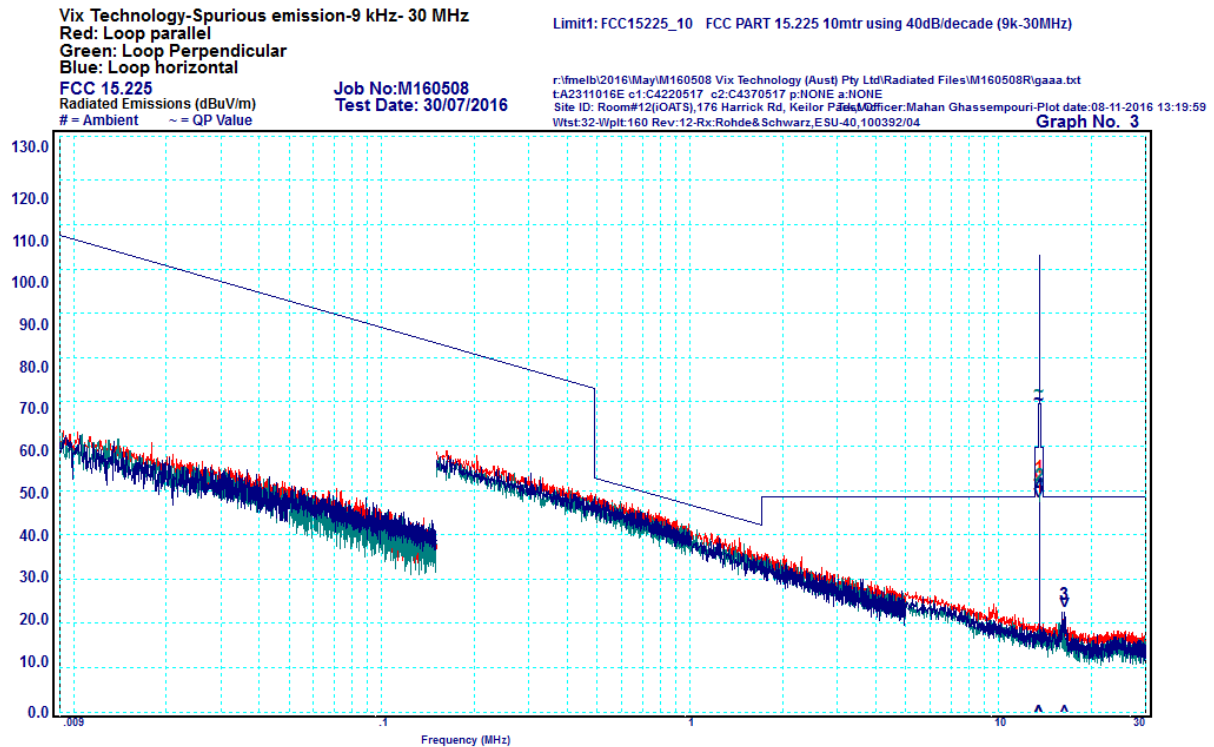
Accredited for compliance with ISO/IEC 17025. The results of the test, calibrations and/or measurement included in this document are traceable to Australian/national standards. NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, calibration and inspection reports.

This document shall not be reproduced except in full.

3.7.2 Frequency Band: 9 kHz - 30 MHz

Measurements were made at a distance of 10 metres. The measurement of emissions between 9 kHz – 150 kHz were made with a resolution bandwidth (RBW) of 200 Hz and the video bandwidth (VBW) of 3 kHz, 150 kHz – 30 MHz were measured with the resolution bandwidth (RBW) of 9 kHz and the video bandwidth (VBW) of 30 kHz.

3.7.2.1 Results



| Point | Frequency (MHz) | Loop Orientation | Quasi-Peak (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|-------|-----------------|------------------|---------------------|----------------|-------------|
| 1 | 13.56 | Parallel | 51.90 | 103.10 | -51.2 |
| 2 | 13.56 | Perpendicular | 72.10 | 103.10 | -31.0 |
| 3 | 16.38 | Perpendicular | 16.30 | 48.60 | -32.3 |
| 4 | 13.56 | Horizontal | 70.50 | 103.10 | -32.6 |

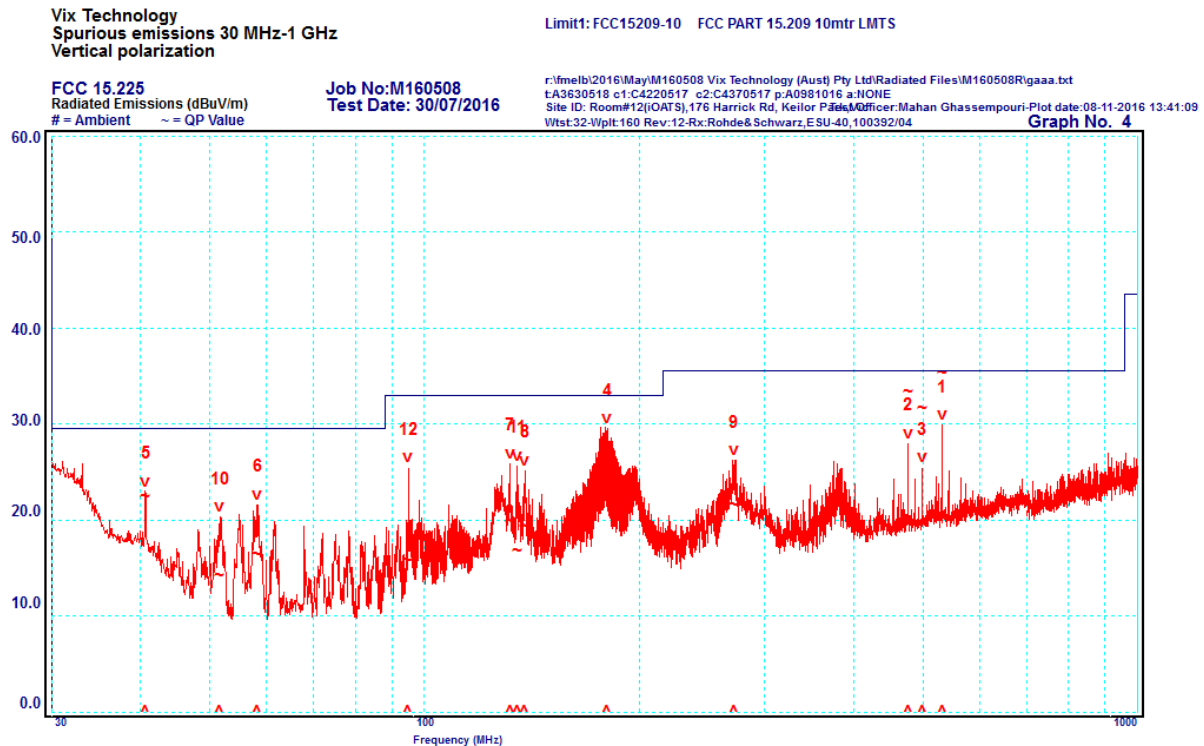


Accredited for compliance with ISO/IEC 17025. The results of the test, calibrations and/or measurement included in this document are traceable to Australian/national standards. NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, calibration and inspection reports.

This document shall not be reproduced except in full.

3.7.3 Frequency Band: 30 - 1000 MHz

Measurements were made at a distance of 10 metres. The measurement of emissions between 30 - 1000 MHz were made with a resolution bandwidth (RBW) of 120 kHz and the video bandwidth (VBW) of 300 kHz. Measurements results are shown in the following graphs.



| Point | Frequency (MHz) | Quasi-Peak (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|-------|-----------------|---------------------|----------------|-------------|
| 1 | 532.00 | 35.3 | 35.5 | -0.2* |
| 2 | 476.59 | 33.3 | 35.5 | -2.2* |
| 3 | 498.76 | 31.6 | 35.5 | -3.9* |
| 4 | 180.70 | 27.1 | 33.0 | -5.9 |
| 5 | 40.69 | 22.5 | 29.5 | -7.0 |
| 6 | 58.33 | 16.4 | 29.5 | -13.1 |
| 7 | 131.86 | 19.8 | 33.0 | -13.2 |
| 8 | 138.30 | 19.3 | 33.0 | -13.7 |
| 9 | 271.68 | 21.6 | 35.5 | -13.9 |
| 10 | 51.65 | 14.2 | 29.5 | -15.3 |
| 11 | 135.05 | 16.7 | 33.0 | -16.3 |
| 12 | 95.02 | 15.8 | 33.0 | -17.2 |

* Within measurement uncertainty, results are below the limit therefore comply with §15.225(d) as the laboratory measurement uncertainty is below the ANSI requirement.



Accredited for compliance with ISO/IEC 17025. The results of the test, calibrations and/or measurement included in this document are traceable to Australian/national standards. NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, calibration and inspection reports.

This document shall not be reproduced except in full.

Vix Technology
Spurious emissions 30 MHz-1 GHz
Horizontal polarization

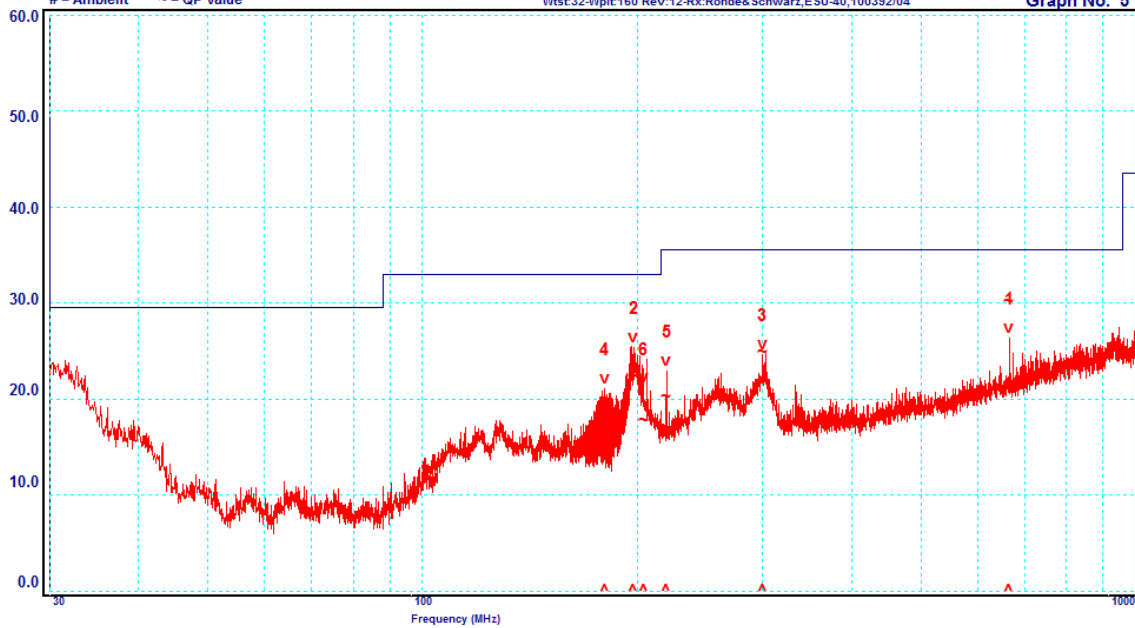
Limit1: FCC15209-10 FCC PART 15.209 10mtr LMTS

FCC 15.225
Radiated Emissions (dBuV/m)
= Ambient ~ = QP Value

Job No: M160508
Test Date: 30/07/2016

r:\fmlb\2016\May\M160508 Vix Technology (Aust) Pty Ltd\Radiated Files\M160508R\gaaa.txt
t:A3630518 c1:C4220517 c2:C4370517 p:A0981016 a:NONE
Site ID: Room#12(iOATS),176 Harrick Rd, Keilor Park, VIC 3049
File No: M160508-1
Plot date: 08-11-2016 13:50:48
Wkst: 32-Wplt: 160 Rev: 12-Rx: Rohde & Schwarz, ESU-40, 100392/04

Graph No. 5



| Point | Frequency (MHz) | Quasi-Peak (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|-------|-----------------|---------------------|----------------|-------------|
| 1 | 665.00 | 30.1 | 35.5 | -5.4 |
| 2 | 197.66 | 22.5 | 33.0 | -10.5 |
| 3 | 300.00 | 24.9 | 35.5 | -10.6 |
| 4 | 180.03 | 19.7 | 33.0 | -13.3 |
| 5 | 220.04 | 20.3 | 35.5 | -15.2 |
| 6 | 204.12 | 17.7 | 33.0 | -15.3 |

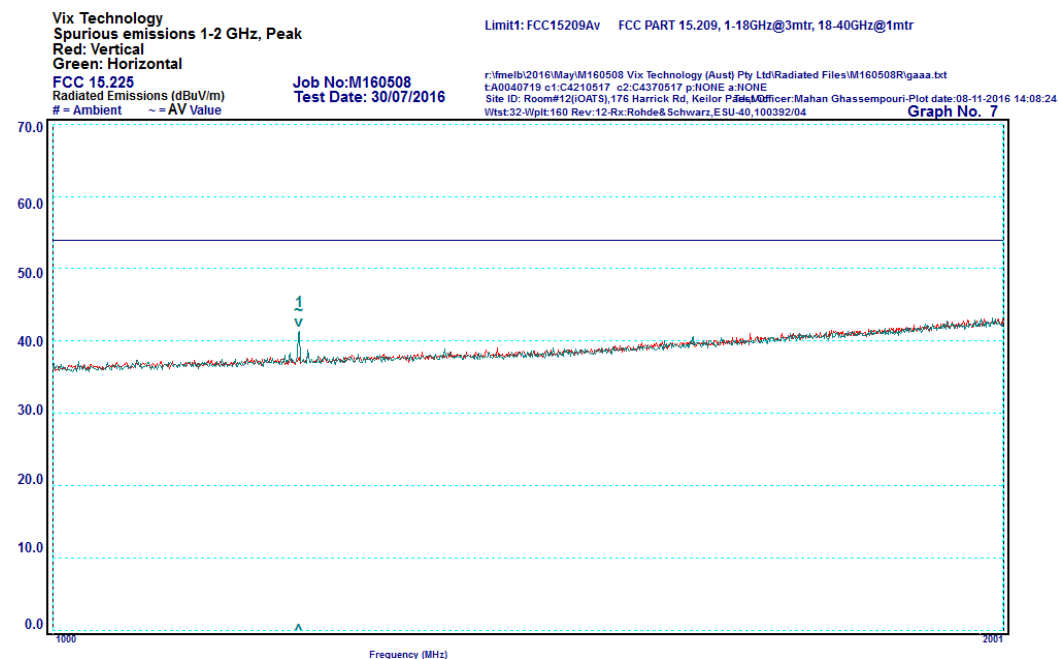
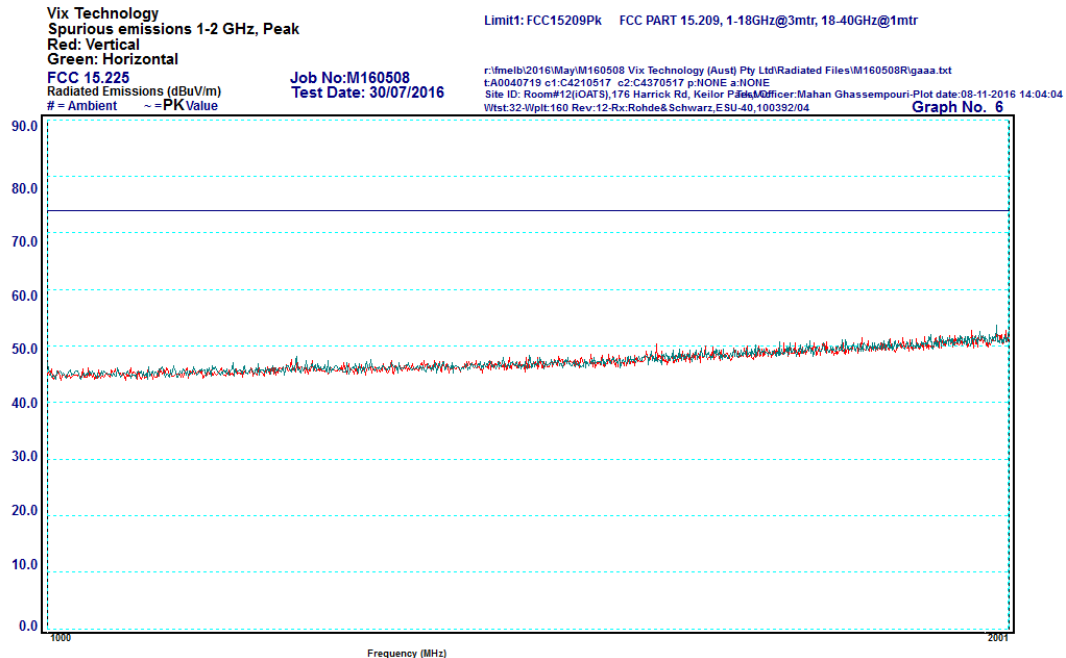


Accredited for compliance with ISO/IEC 17025. The results of the test, calibrations and/or measurement included in this document are traceable to Australian/national standards. NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, calibration and inspection reports.

This document shall not be reproduced except in full.

3.7.3 Frequency Band: 1000 - 2000 MHz

Measurements were made at a distance of 3 metres. The measurement of emissions between 1000 - 2000 MHz were made with a resolution bandwidth (RBW) of 1 MHz and the video bandwidth (VBW) of 3 MHz. Measurements were performed using Peak and average detectors for both polarizations. The EUT was placed 1.5 m above the floor. Measurement results are shown in the following graphs.



| Point | Polarization | Frequency (MHz) | Quasi-Peak (dBuV/m) | Limit (dBuV/m) | Margin (dB) |
|-------|--------------|-----------------|---------------------|----------------|-------------|
| 1 | Horizontal | 1197.20 | 44.1 | 54.0 | -9.9 |

3.7.5 Conclusion

The spurious emissions complied with the general limits of §15.209 by a margin of 0.2 dB.



Accredited for compliance with ISO/IEC 17025. The results of the test, calibrations and/or measurement included in this document are traceable to Australian/national standards. NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, calibration and inspection reports.

This document shall not be reproduced except in full.

3.8 §15.225(e) Frequency Tolerance

The frequency tolerance of the carrier signal shall be maintained within $\pm 0.01\%$ of the operating frequency (13.5615 MHz) over a temperature variation of $-20\text{ }^{\circ}\text{C}$ to $+50\text{ }^{\circ}\text{C}$ at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of $20\text{ }^{\circ}\text{C}$. Measurements were performed according to ANSI C63.10, Clause 6.8.

| Temperature $^{\circ}\text{C}$ | Voltage V | Measured frequency (MHz) | | | | Limit (MHz) | Result |
|-----------------------------------|--------------|--------------------------|-----------|-----------|------------|-------------------------|--------|
| | | start up | 2 min | 5 min | 10 min | | |
| 50 | 24.0 | 13.561474 | 13.561461 | 13.561452 | 13.561445 | 13.56014385-13.56285615 | Pass |
| 40 | 24.0 | 13.561464 | 13.561454 | 13.561451 | 13.561450 | 13.56014385-13.56285615 | Pass |
| 30 | 24.0 | 13.561371 | 13.561495 | 13.561484 | 13.561479 | 13.56014385-13.56285615 | Pass |
| 20 | 20.4 | 13.561551 | 13.561530 | 13.561524 | 13.561517 | 13.56014385-13.56285615 | Pass |
| | 24.0 | 13.561543 | 13.561531 | 13.561524 | 13.561517* | 13.56014385-13.56285615 | Pass |
| | 27.6 | 13.561546 | 13.561530 | 13.561524 | 13.561517 | 13.56014385-13.56285615 | Pass |
| 10 | 24.0 | 13.561593 | 13.561576 | 13.561565 | 13.561559 | 13.56014385-13.56285615 | Pass |
| 0 | 24.0 | 13.561635 | 13.561622 | 13.561611 | 13.561604 | 13.56014385-13.56285615 | Pass |
| -10 | 24.0 | 13.561650 | 13.561643 | 13.561637 | 13.561634 | 13.56014385-13.56285615 | Pass |
| -20 | 24.0 | 13.561671 | 13.561670 | 13.561668 | 13.561667 | 13.56014385-13.56285615 | Pass |

* Reference value used as operating frequency.

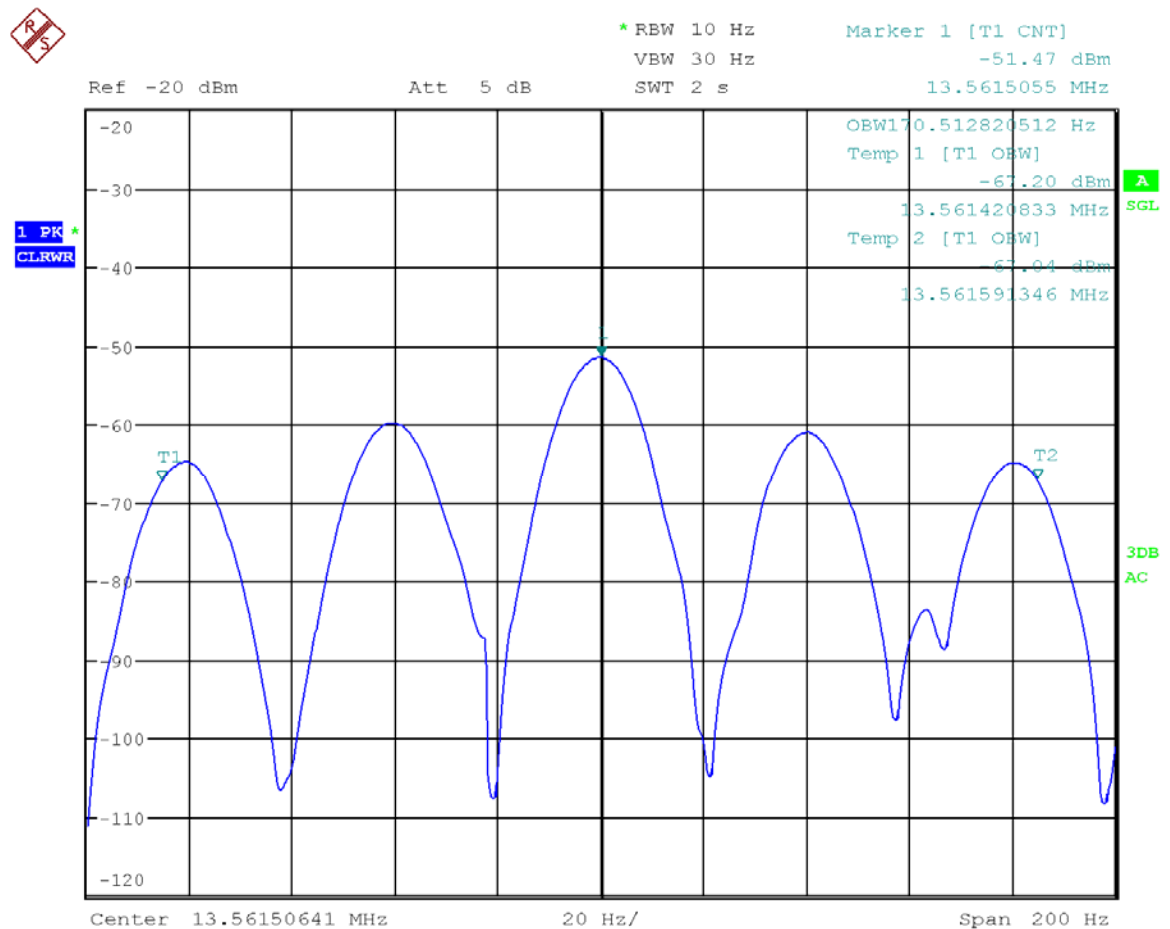


Accredited for compliance with ISO/IEC 17025. The results of the test, calibrations and/or measurement included in this document are traceable to Australian/national standards. NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, calibration and inspection reports.

This document shall not be reproduced except in full.

3.9 §2.1049 Occupied Bandwidth

The occupied bandwidth was determined using the 99% transmit power function of a spectrum analyzer. The EUT was set to transmit continuously. Resolution bandwidth and video bandwidth was set to 10 Hz and 30 Hz respectively.



| Operating Frequency (MHz) | Occupied Bandwidth |
|---------------------------|--------------------|
| 13.5615 | 170.5 Hz |



Accredited for compliance with ISO/IEC 17025. The results of the test, calibrations and/or measurement included in this document are traceable to Australian/national standards. NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, calibration and inspection reports.

This document shall not be reproduced except in full.

4.0 COMPLIANCE STATEMENT

The Card Processor, Model CP6100, tested on behalf of Vix Technology **complied** with the requirements of 47 CFR, Part 15 Subpart C - Rules for Radio Frequency Devices (intentional radiators), Section 15.225 - Operation within the band 13.110-14.010 MHz.

Results were as follows:

| FCC Part 15 Subpart C | Test Performed | Results |
|-----------------------|---|----------------|
| 15.203 | Antenna Requirement | Complied |
| 15.205 | Restricted bands of operation | Complied |
| 15.207 | Conducted Limits | Not applicable |
| 15.209 | Radiated Emissions Limits; General Requirements | Complied |
| 15.225(a) | Fundamental Field Strength | Complied |
| 15.225(b and c) | Transmission Mask 13.110-14.010 MHz | Complied |
| 15.225(d) | Spurious Emissions | Complied |
| 15.225(e) | Frequency Tolerance | Complied |
| 2.1049 | Occupied Bandwidth | 170.5 Hz |

5.0 MEASUREMENT UNCERTAINTY

EMC Technologies has evaluated the equipment and the methods used to perform the emissions testing. The estimated measurement uncertainties for emissions tests shown within this report are as follows:

Conducted Emissions: 9 kHz to 30 MHz ± 3.2 dB

Radiated Emissions:

| | |
|---------------------|--------------|
| 9 kHz to 30 MHz | ± 4.1 dB |
| 30 MHz to 300 MHz | ± 5.1 dB |
| 300 MHz to 1000 MHz | ± 4.7 dB |
| 1 GHz to 18 GHz | ± 4.6 dB |

Peak Output Power: ± 1.5 dB

The above expanded uncertainties are based on standard uncertainties multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95%.



Accredited for compliance with ISO/IEC 17025. The results of the test, calibrations and/or measurement included in this document are traceable to Australian/national standards. NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, calibration and inspection reports.

This document shall not be reproduced except in full.