

EMC Test Report Application for Grant of Equipment Authorization Class II Permissive Change/Reassessment Industry Canada RSS-Gen Issue 2 / RSS 210 Issue 7 FCC Part 15 Subpart C

Model: PROXMB82

IC CERTIFICATION #:	1856A-PROXMB82
FCC ID:	HZB-PROXMB82

APPLICANT: Proxim Wireless Corporation 1561 Buckeye Dr. Milpitas, CA 95035

TEST SITE(S): Elliott Laboratories 41039 Boyce Road. Fremont, CA. 94538-2435

IC SITE REGISTRATION #:

REPORT DATE: September 21, 2009

2845B-3; 2845B-4, 2845B-5

FINAL TEST DATES:

August 3, August 4, August 5, August 6, August 21, August 28, August 31, September 1, September 2 and September 3, 2009

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Testing Cert #2016-01

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REVISION HISTORY

Rev#	Date	Comments	Modified By
-	October 29, 2009	First Release	

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SCOPE

An electromagnetic emissions test has been performed on the Proxim Wireless Corporation model PROXMB82, pursuant to the following rules:

Industry Canada RSS-Gen Issue 2 RSS 210 Issue 7 "Low-power Licence-exempt Radiocommunication Devices (All Frequency Bands): Category I Equipment" FCC Part 15 Subpart C

Conducted and radiated emissions data has been collected, reduced, and analyzed within this report in accordance with measurement guidelines set forth in the following reference standards and as outlined in Elliott Laboratories test procedures:

ANSI C63.4:2003 FCC DTS Measurement Procedure KDB558074, March 2005

The intentional radiator above has been tested in a simulated typical installation to demonstrate compliance with the relevant Industry Canada performance and procedural standards.

Final system data was gathered in a mode that tended to maximize emissions by varying orientation of EUT, orientation of power and I/O cabling, antenna search height, and antenna polarization.

Every practical effort was made to perform an impartial test using appropriate test equipment of known calibration. All pertinent factors have been applied to reach the determination of compliance.

OBJECTIVE

The primary objective of the manufacturer is compliance with the regulations outlined in the previous section.

Prior to marketing in the USA, all unlicensed transmitters and transceivers require certification. Receive-only devices operating between 30 MHz and 960 MHz are subject to either certification or a manufacturer's declaration of conformity, with all other receive-only devices exempt from the technical requirements.

Prior to marketing in Canada, Class I transmitters, receivers and transceivers require certification. Class II devices are required to meet the appropriate technical requirements but are exempt from certification requirements.

Certification is a procedure where the manufacturer submits test data and technical information to a certification body and receives a certificate or grant of equipment authorization upon successful completion of the certification body's review of the submitted documents. Once the equipment authorization has been obtained, the label indicating compliance must be attached to all identical units, which are subsequently manufactured.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product which may result in increased emissions should be checked to ensure compliance has been maintained (i.e., printed circuit board layout changes, different line filter, different power supply, harnessing or I/O cable changes, etc.).

STATEMENT OF COMPLIANCE

The tested sample of Proxim Wireless Corporation model PROXMB82 complied with the requirements of the following regulations:

Industry Canada RSS-Gen Issue 2 RSS 210 Issue 7 "Low-power Licence-exempt Radiocommunication Devices (All Frequency Bands): Category I Equipment" FCC Part 15 Subpart C

Maintenance of compliance is the responsibility of the manufacturer. Any modifications to the product should be assessed to determine their potential impact on the compliance status of the device with respect to the standards detailed in this test report.

The test results recorded herein are based on a single type test of Proxim Wireless Corporation model PROXMB82 and therefore apply only to the tested sample. The sample was selected and prepared by Ivaylo Tankov of Proxim Wireless Corporation.

DEVIATIONS FROM THE STANDARDS

No deviations were made from the published requirements listed in the scope of this report.

TEST RESULTS SUMMARY

DIGITAL TRANSMISSION SYSTEMS (2400 - 2483.5MHz)

FCC Rule Part	RSS Rule Part	Description	Measured Value / Comments	Limit / Requirement	Result
15.247(a)	RSS 210 A8.2	Digital Modulation	Note 1	-	Complies
15.247 (a) (2)	RSS 210 A8.2 (1)	6dB Bandwidth	Note 1	>500kHz	Complies
15.247 (b) (3)	RSS 210 A8.2 (4)	Output Power (multipoint systems)	Sector Antenna 802.11b:-1.9 dBm 802.11g: -2.3dBm HT20: 1.9 dBm HT40: 2.8 dBm EIRP: 0.096 W Panel Antenna 802.11b: 8.2 dBm 802.11g: 7.4 dBm HT20: 12.4 dBm HT40: 12.8 dBm EIRP: 1.9 W	1 Watt, EIRP limited to 4 Watts.	Complies
15.247(d)	RSS 210 A8.2 (2)	Power Spectral Density		-	Complies
15.247(c)	RSS 210 A8.5	Antenna Port Note 1 Spurious Emissions 30MHz – 25 GHz		-	Complies
15.247(c) / 15.209	RSS 210 A8.5	Radiated Spurious Emissions 30MHz – 25 GHz	53.4dBµV/m @ 2386.5MHz (-0.6dB)	15.207 in restricted bands, all others < -30dBc ^{Note 4}	Complies

Note 1: Bandwidth, maximum output power and psd, antenna port spurious emissions were not evaluated as these characteristics are not affected by the proposed changes which are to add high gain panel and sector antennas. Note 2: The maximum output power from the module is taken from the original module certification reports and included for reference only. This maximum power rating is not affected by the proposed change (see note 1), however when using the high gain antennas the output power has to be reduced to the values noted (note 3).

Note 3: This is the maximum output power to be used with sector and panel antennas. Professional installation is required for host systems that use these high gain antennas to ensure the output power setting does not exceed the values listed in this table. The EIRP was calculated using antenna gain of 17 dBi for the sector and 20dBi for the panel.

Note 4: Limit of -30dBc used because the power was measured using the UNII test procedure (maximum power averaged over a transmission burst) / RMS averaging over a time interval, as permitted under RSS 210 section A8.4(4).

FCC Rule Part	RSS Rule Part	Description	Measured Value / Comments	Limit / Requirement	Result
15.247(a)	RSS 210 A8.2	Digital Modulation		Note 1	
15.247 (a) (2)	RSS 210 A8.2 (1)	6dB Bandwidth		Note 1	
15.247 (b)	RSS 210 A8.2 (4)	Output Power (multipoint systems)	Sector Antenna 802.11a: -0.7 dBm HT20: 3.5 dBm HT40:4.3 dBm EIRP: 0.271 W Panel Antenna 802.11a:-0.6 dBm HT20: 2.6 dBm HT40: 4.3 dBm EIRP: 2.712 W	1Watt, EIRP limited to 4 Watts	Complies
15.247(d)	RSS 210 A8.2 (2)	Power Spectral Density			
15.247(c)	RSS 210 A8.5	Antenna Port Spurious Emissions – 30MHz – 40 GHz	- Note 1		
15.247(c) / 15.209	RSS 210 A8.5 Table 2, 3	Radiated Spurious Emissions 30MHz – 40 GHz	$< -30 dBc^{Note 4}$		Complies
Note 1: Bandwidth, maximum output power and psd, antenna port spurious emissions were not evaluated as these					

DIGITAL TRANSMISSION SYSTEMS (5725 - 5850 MHz)

Note 1: Bandwidth, maximum output power and psd, antenna port spurious emissions were not evaluated as these characteristics are not affected by the proposed changes which are to add high gain panel and sector antennas. Note 2: The maximum output power from the module is taken from the original module certification reports and included for reference only. This maximum power rating is not affected by the proposed change, however when using the high gain antennas the output power has to be reduced to the values noted (note 3).

Note 3: This is the maximum output power has to be reduced to the values listed (note 5). Note 3: This is the maximum output power to be used with sector and panel antennas. Professional installation is required for host systems that use these high gain antennas to ensure the output power setting does not exceed the values listed in this table. The EIRP calculated using antenna gain of 20 dBi for the sector and 30dBi for the panel antennas.

Note 4: Limit of -30dBc used because the power was measured using the UNII test procedure (maximum power averaged over a transmission burst) / RMS averaging over a time interval, as permitted under RSS 210 section A8.4(4).

GENERAL REQUIREMENTS APPLICABLE TO ALL BANDS

FCC Rule Part	RSS Rule part	Description	Measured Value / Comments	Limit / Requirement	Result (margin)
15.203	_	RF Connector	High gain panel and sector antennas use standard N-type connectors. Host systems using these antennas must require professional installation.	Unique connector or professional installation	Complies
-	RSS GEN 6 (b) Note 3	Receiver spurious emissions	-63.3dBm @ 7713.74MHz (-5.5dB)	30-1000MHz 2nW (-57dBm) > 1GHz 5nW (-53dBm)	Complies (Note 2)
15.207	RSS GEN Table 2	AC Conducted Emissions	Note 1		
15.247 (b) (5) 15.407 (f)	RSS 102	RF Exposure Requirements	Refer to MPE calculations, original RSS 102 declaration remains valid.	Refer to OET 65, FCC Part 1 and RSS 102	Complies
-	RSP 100 RSS GEN 7.1.5	User Manual	Refer to example host system manual	Statement required regarding non- interference	Complies
-	RSP 100 RSS GEN 7.1.5	User Manual	Refer to example host system manual	Statement for products with detachable antenna	Complies
-	- RSP 100 RSS GEN 99% Bandwidth Note 1 4.4.1				
Note 1: Bandwidth and AC conducted emissions were not evaluated as these characteristics are not affected by the proposed changes which are to add high gain panel and sector antennas. Note 2: As the radiated spurious emissions from the module had been measured previously, and the scope of changes was to add new antennas, antenna port measurements were made in lieu of radiated measurements. Note 3: Badiated emissions from the receiver had already been evaluated during the original product evaluation					

Note 3: Radiated emissions from the receiver had already been evaluated during the original product evaluation and certification. As the scope of the permissive changes was to add new antennas the receiver spurious measurements were limited to direct measurements at the antenna port.

MEASUREMENT UNCERTAINTIES

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level and were calculated in accordance with UKAS document LAB 34.

Measurement Type	Frequency Range (MHz)	Calculated Uncertainty (dB)
Conducted Emissions Radiated Emissions Radiated Emissions Radiated Emissions	0.15 to 30 0.015 to 30 30 to 1000 1000 to 40000	$\pm 2.4 \\ \pm 3.0 \\ \pm 3.6 \\ \pm 6.0$

EQUIPMENT UNDER TEST (EUT) DETAILS

GENERAL

The Proxim Wireless Corporation model PROXMB82 is an 802.11abgn module that is designed to operate in the 2400-2483.5MHz, 5150-5250 MHz, 5250-5350 MHz, 5470 - 5725 MHz and 5725-5850 MHz bands. The scope of testing was to add some new, high gain antennas for use with outdoor Access Points.

For testing purposes the module was installed into the mini PCI slot of a host system. The enclosure of the host system was removed to expose the module on all sides as required for modular testing.

The sample was received on July 2, 2009 and tested on August 3, August 4, August 5, August 6, August 21, August 28, August 31, September 1, September 2 and September 3, 2009. The EUT consisted of the following component(s):

Company	Model	Description	Serial Number	FCC ID
Proxim	PROXMB82	802.11abgn		HZB-
Corporation	PROAMD82	Module	none	PROXMB82

ANTENNA SYSTEM

The antenna connects to the EUT via a standard coaxial N-connector. The antennas evaluated were a high gain panel and a high gain sector antenna for 2.4GHz operation and a high gain panel and a high gain sector antenna for 5GHz operation. Host systems using these antennas will require professional installation; therefore the use of standard connectors is permitted.

ENCLOSURE

The EUT does not have an enclosure as it is designed to be installed within the enclosure of a host computer or system.

MODIFICATIONS

No modifications were made to the EUT during the time the product was at Elliott.

SUPPORT EQUIPMENT

The following equipment was used as support equipment for testing:

Company	Model	Description	Serial Number	FCC ID
Proxim	-	Access Point	-	-
Sony	VAIO	Laptpop	-	DoC

EUT INTERFACE PORTS

Port	Connected	Cable(s)			
FOIL	То	Description	Shielded or Unshielded	Length(m)	
AP ethernet	Laptop	Cat 5	Unshielded	3	
AP mini PCI	EUT	-	Direct connection	-	
EUT port A	Antenna 1	Coaxial	-	3	
EUT Port B	Antenna 2	Coaxial	-	3	
EUT Port C	Antenna 3	Coaxial	_	3	

The I/O cabling configuration during testing was as follows:

EUT OPERATION

During testing, the EUT was configured in a continuous transmit or receive mode using the ART software utility to control the radio.

When the module is used with high gain antennas the operating firmware will allow the selection of output power levels below 0dBm As the ART utility used during testing does not have the dynamic range to allow out put power to be set below 0dBm, an external 10dB or 20dB attenuator was used between antenna port and antenna to simulate the lower power levels that can be achieved by the operating software. Proxim justified the use of the approach based on the fact that the signal spectrum at the higher output powers from the module under ART software control would be more distorted (wider skirts and higher spurious emissions) than if the output power were at the lower rf signal level.

All power measurements were made at the far end of the attenuator.

TEST SITE

GENERAL INFORMATION

Final test measurements were taken at the test sites listed below. Pursuant to section 2.948 of the FCC's Rules and section 3.3 of RSP-100, construction, calibration, and equipment data has been filed with the Commission and with industry Canada.

Site	Site Registration		Location
Site	FCC	Canada	
Chamber 3	769238	2845B-3	41039 Boyce Road
Chamber 4	211948	2845B-4	Fremont,
Chamber 5	211948	2845B-5	CA 94538-2435

ANSI C63.4:2003 recommends that ambient noise at the test site be at least 6 dB below the allowable limits. Ambient levels are below this requirement. The test site(s) contain separate areas for radiated and conducted emissions testing. Considerable engineering effort has been expended to ensure that the facilities conform to all pertinent requirements of ANSI C63.4:2003.

CONDUCTED EMISSIONS CONSIDERATIONS

Conducted emissions testing is performed in conformance with ANSI C63.4:2003. Measurements are made with the EUT connected to the public power network through a nominal, standardized RF impedance, which is provided by a line impedance stabilization network, known as a LISN. A LISN is inserted in series with each current-carrying conductor in the EUT power cord.

RADIATED EMISSIONS CONSIDERATIONS

The FCC has determined that radiation measurements made in a shielded enclosure are not suitable for determining levels of radiated emissions. Radiated measurements are performed in an open field environment or in a semi-anechoic chamber. The test sites are maintained free of conductive objects within the CISPR defined elliptical area incorporated in ANSI C63.4:2003 guidelines and meet the Normalized Site Attenuation (NSA) requirements of ANSI C63.4:2003.

MEASUREMENT INSTRUMENTATION

RECEIVER SYSTEM

An EMI receiver as specified in CISPR 16-1-1 is used for emissions measurements. The receivers used can measure over the frequency range of 9 kHz up to 2000 MHz. These receivers allow both ease of measurement and high accuracy to be achieved. The receivers have Peak, Average, and CISPR (Quasi-peak) detectors built into their design so no external adapters are necessary. The receiver automatically sets the required bandwidth for the CISPR detector used during measurements. If the repetition frequency of the signal being measured is below 20Hz, peak measurements are made in lieu of Quasi-Peak measurements.

For measurements above the frequency range of the receivers, a spectrum analyzer is utilized because it provides visibility of the entire spectrum along with the precision and versatility required to support engineering analysis. Average measurements above 1000MHz are performed on the spectrum analyzer using the linear-average method with a resolution bandwidth of 1 MHz and a video bandwidth of 10 Hz, unless the signal is pulsed in which case the average (or video) bandwidth of the measuring instrument is reduced to onset of pulse desensitization and then increased.

INSTRUMENT CONTROL COMPUTER

The receivers utilize either a Rohde & Schwarz EZM Spectrum Monitor/Controller or contain an internal Spectrum Monitor/Controller to view and convert the receiver measurements to the field strength at an antenna or voltage developed at the LISN measurement port, which is then compared directly with the appropriate specification limit. This provides faster, more accurate readings by performing the conversions described under Sample Calculations within the Test Procedures section of this report. Results are printed in a graphic and/or tabular format, as appropriate. A personal computer is used to record all measurements made with the receivers.

The Spectrum Monitor provides a visual display of the signal being measured. In addition, the controller or a personal computer run automated data collection programs which control the receivers. This provides added accuracy since all site correction factors, such as cable loss and antenna factors are added automatically.

LINE IMPEDANCE STABILIZATION NETWORK (LISN)

Line conducted measurements utilize a fifty microhenry Line Impedance Stabilization Network as the monitoring point. The LISN used also contains a 250 uH CISPR adapter. This network provides for calibrated radio frequency noise measurements by the design of the internal low pass and high pass filters on the EUT and measurement ports, respectively.

FILTERS/ATTENUATORS

External filters and precision attenuators are often connected between the receiving antenna or LISN and the receiver. This eliminates saturation effects and non-linear operation due to high amplitude transient events.

ANTENNAS

A loop antenna is used below 30 MHz. For the measurement range 30 MHz to 1000 MHz either a combination of a biconical antenna and a log periodic or a bi-log antenna is used. Above 1000 MHz, horn antennas are used. The antenna calibration factors to convert the received voltage to an electric field strength are included with appropriate cable loss and amplifier gain factors to determine an overall site factor, which is then programmed into the test receivers or incorporated into the test software.

ANTENNA MAST AND EQUIPMENT TURNTABLE

The antennas used to measure the radiated electric field strength are mounted on a nonconductive antenna mast equipped with a motor-drive to vary the antenna height. Measurements below 30 MHz are made with the loop antenna at a fixed height of 1m above the ground plane.

ANSI C63.4:2003 specifies that the test height above ground for table mounted devices shall be 80 centimeters. Floor mounted equipment shall be placed on the ground plane if the device is normally used on a conductive floor or separated from the ground plane by insulating material from 3 to 12 mm if the device is normally used on a non-conductive floor. During radiated measurements, the EUT is positioned on a motorized turntable in conformance with this requirement.

INSTRUMENT CALIBRATION

All test equipment is regularly checked to ensure that performance is maintained in accordance with the manufacturer's specifications. All antennas are calibrated at regular intervals with respect to tuned half-wave dipoles. An exhibit of this report contains the list of test equipment used and calibration information.

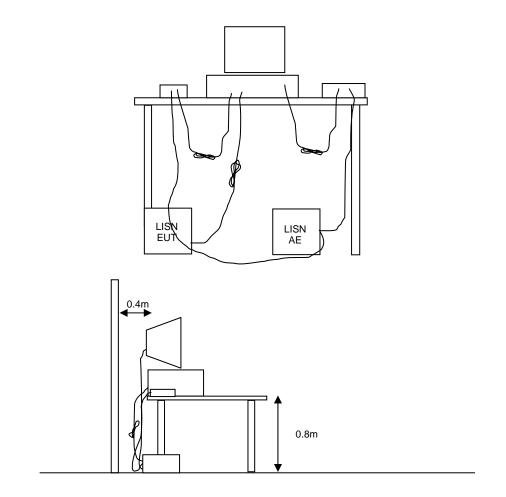
TEST PROCEDURES

EUT AND CABLE PLACEMENT

The regulations require that interconnecting cables be connected to the available ports of the unit and that the placement of the unit and the attached cables simulate the worst case orientation that can be expected from a typical installation, so far as practicable. To this end, the position of the unit and associated cabling is varied within the guidelines of ANSI C63.4:2003, and the worst-case orientation is used for final measurements.

CONDUCTED EMISSIONS

Conducted emissions are measured at the plug end of the power cord supplied with the EUT. Excess power cord length is wrapped in a bundle between 30 and 40 centimeters in length near the center of the cord. Preliminary measurements are made to determine the highest amplitude emission relative to the specification limit for all the modes of operation. Placement of system components and varying of cable positions are performed in each mode. A final peak mode scan is then performed in the position and mode for which the highest emission was noted on all current carrying conductors of the power cord.



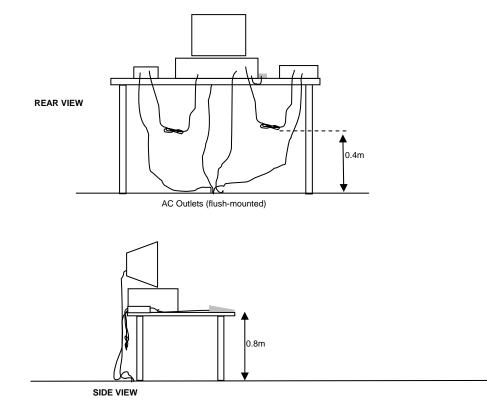
RADIATED EMISSIONS

A preliminary scan of the radiated emissions is performed in which all significant EUT frequencies are identified with the system in a nominal configuration. At least two scans are performed, one scan for each antenna polarization (horizontal and vertical; loop parallel and perpendicular to the EUT). During the preliminary scans, the EUT is rotated through 360°, the antenna height is varied (for measurements above 30 MHz) and cable positions are varied to determine the highest emission relative to the limit. Preliminary scans may be performed in a fully anechoic chamber for the purposes of identifying the frequencies of the highest emissions from the EUT.

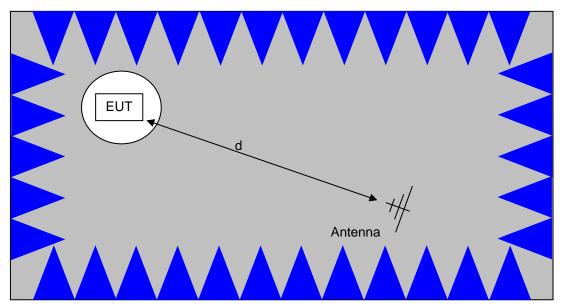
A speaker is provided in the receiver to aid in discriminating between EUT and ambient emissions. Other methods used during the preliminary scan for EUT emissions involve scanning with near field magnetic loops, monitoring I/O cables with RF current clamps, and cycling power to the EUT.

Final maximization is a phase in which the highest amplitude emissions identified in the spectral search are viewed while the EUT azimuth angle is varied from 0 to 360 degrees relative to the receiving antenna. The azimuth, which results in the highest emission is then maintained while varying the antenna height from one to four meters (for measurements above 30 MHz, measurements below 30 MHz are made with the loop antenna at a fixed height of 1m). The result is the identification of the highest amplitude for each of the highest peaks. Each recorded level is corrected in the receiver using appropriate factors for cables, connectors, antennas, and preamplifier gain.

When testing above 18 GHz, the receive antenna is located at 1 meter from the EUT and the antenna height is restricted to a maximum of 2.5 meters.

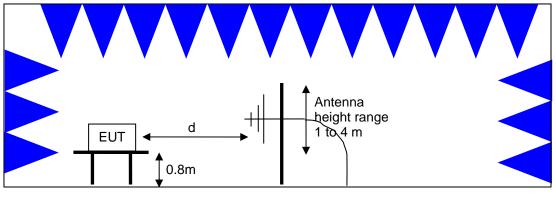


Typical Test Configuration for Radiated Field Strength Measurements



The anechoic materials on the walls and ceiling ensure compliance with the normalized site attenuation requirements of CISPR 16 / CISPR 22 / ANSI C63.4 for an alternate test site at the measurement distances used.

Floor-standing equipment is placed on the floor with insulating supports between the unit and the ground plane.



<u>Test Configuration for Radiated Field Strength Measurements</u> <u>Semi-Anechoic Chamber, Plan and Side Views</u>

BANDWIDTH MEASUREMENTS

The 6dB, 20dB and/or 26dB signal bandwidth is measured in using the bandwidths recommended by ANSI C63.4. When required, the 99% bandwidth is measured using the methods detailed in RSS GEN.

SPECIFICATION LIMITS AND SAMPLE CALCULATIONS

The limits for conducted emissions are given in units of microvolts, and the limits for radiated emissions are given in units of microvolts per meter at a specified test distance. Data is measured in the logarithmic form of decibels relative to one microvolt, or dB microvolts (dBuV). For radiated emissions, the measured data is converted to the field strength at the antenna in dB microvolts per meter (dBuV/m). The results are then converted to the linear forms of uV and uV/m for comparison to published specifications.

For reference, converting the specification limits from linear to decibel form is accomplished by taking the base ten logarithm, then multiplying by 20. These limits in both linear and logarithmic form are as follows:

CONDUCTED EMISSIONS SPECIFICATION LIMITS: FCC 15.207; FCC 15.107(a), RSS GEN

The table below shows the limits for the emissions on the AC power line from an intentional radiator and a receiver.

Frequency (MHz)	Average Limit (dBuV)	Quasi Peak Limit (dBuV)
0.150 to 0.500 between 56.0 and 46		Linear decrease on logarithmic frequency axis between 66.0 and 56.0
0.500 to 5.000	46.0	56.0
5.000 to 30.000	50.0	60.0

GENERAL TRANSMITTER RADIATED EMISSIONS SPECIFICATION LIMITS

The table below shows the limits for the spurious emissions from transmitters that fall in restricted bands¹ (with the exception of transmitters operating under FCC Part 15 Subpart D and RSS 210 Annex 9), the limits for all emissions from a low power device operating under the general rules of RSS 310 (tables 3 and 4), RSS 210 (table 2) and FCC Part 15 Subpart C section 15.209.

Frequency Range (MHz)	Limit (uV/m)	Limit (dBuV/m @ 3m)
0.009-0.490	2400/F _{KHz} @ 300m	67.6-20*log ₁₀ (F _{KHz}) @ 300m
0.490-1.705	24000/F _{KHz} @ 30m	87.6-20*log ₁₀ (F _{KHz}) @ 30m
1.705 to 30	30 @ 30m	29.5 @ 30m
30 to 88	100 @ 3m	40 @ 3m
88 to 216	150 @ 3m	43.5 @ 3m
216 to 960	200 @ 3m	46.0 @ 3m
Above 960	500 @ 3m	54.0 @ 3m

RECEIVER RADIATED SPURIOUS EMISSIONS SPECIFICATION LIMITS

The table below shows the limits for the spurious emissions from receivers as detailed in FCC Part 15.109, RSS 210 Table 2, RSS GEN Table 1 and RSS 310 Table 3. Note that receivers operating outside of the frequency range 30 MHz – 960 MHz are exempt from the requirements of 15.109.

Frequency Range (MHz)	Limit (uV/m @ 3m)	Limit (dBuV/m @ 3m)
30 to 88	100	40
88 to 216	150	43.5
216 to 960	200	46.0
Above 960	500	54.0

¹ The restricted bands are detailed in FCC 15.203, RSS 210 Table 1 and RSS 310 Table 2

OUTPUT POWER LIMITS - DIGITAL TRANSMISSION SYSTEMS

The table below shows the limits for output power and output power density. Where the signal bandwidth is less than 20 MHz the maximum output power is reduced to the power spectral density limit plus 10 times the log of the bandwidth (in MHz).

Operating Frequency (MHz)	Output Power	Power Spectral Density
902 - 928	1 Watt (30 dBm)	8 dBm/3kHz
2400 - 2483.5	1 Watt (30 dBm)	8 dBm/3kHz
5725 - 5850	1 Watt (30 dBm)	8 dBm/3kHz

The maximum permitted output power is reduced by 1dB for every dB the antenna gain exceeds 6dBi. Fixed point-to-point applications using the 5725 - 5850 MHz band are not subject to this restriction.

TRANSMIT MODE SPURIOUS RADIATED EMISSIONS LIMITS – FHSS and DTS SYSTEMS

The limits for unwanted (spurious) emissions from the transmitter falling in the restricted bands are those specified in the general limits sections of FCC Part 15 and RSS 210. All other unwanted (spurious) emissions shall be at least 20dB below the level of the highest in-band signal level (30dB if the power is measured using the sample detector/power averaging method).

SAMPLE CALCULATIONS - CONDUCTED EMISSIONS

Receiver readings are compared directly to the conducted emissions specification limit (decibel form) as follows:

$$R_r - S = M$$

where:

 $R_r = Receiver Reading in dBuV$

S = Specification Limit in dBuV

M = Margin to Specification in +/- dB

SAMPLE CALCULATIONS - RADIATED EMISSIONS

Receiver readings are compared directly to the specification limit (decibel form). The receiver internally corrects for cable loss, preamplifier gain, and antenna factor. The calculations are in the reverse direction of the actual signal flow, thus cable loss is added and the amplifier gain is subtracted. The Antenna Factor converts the voltage at the antenna coaxial connector to the field strength at the antenna elements.

A distance factor, when used for electric field measurements above 30MHz, is calculated by using the following formula:

$$F_d = 20*LOG_{10} (D_m/D_s)$$

where:

 F_d = Distance Factor in dB D_m = Measurement Distance in meters D_s = Specification Distance in meters

For electric field measurements below 30MHz the extrapolation factor is either determined by making measurements at multiple distances or a theoretical value is calculated using the formula:

$$F_d = 40*LOG_{10} (D_m/D_s)$$

Measurement Distance is the distance at which the measurements were taken and Specification Distance is the distance at which the specification limits are based. The antenna factor converts the voltage at the antenna coaxial connector to the field strength at the antenna elements.

The margin of a given emission peak relative to the limit is calculated as follows:

$$R_c = R_r + F_d$$

and

 $M = R_c - L_s$

where:

 R_r = Receiver Reading in dBuV/m

 F_d = Distance Factor in dB

 R_c = Corrected Reading in dBuV/m

- L_S = Specification Limit in dBuV/m
- M = Margin in dB Relative to Spec

Manufacturer	Description	Model #	Asset #	Cal Due
Hewlett Packard	Microwave Preamplifier, 1-26.5GHz	8449B	263	09-Oct-09
EMCO	Antenna, Horn, 1-18 GHz	3115	786	06-Dec-09
EMCO	Antenna, Horn, 1-18 GHz (SA40-Blu)	3115	1386	02-Sep-10
Hewlett Packard	SpectAn 9 kHz - 40 GHz, FT (SA40) Blue	8564E (84125C)	1393	10-Apr-10
Micro-Tronics	Band Reject Filter, 5725-5875 MHz	BRC50705-02	1728	07-Oct-09
Micro-Tronics	Band Reject Filter, 2400-2500 MHz	BRM50702- 02	1731	02-Dec-09
Hewlett Packard	SpecAn 9 kHz - 40 GHz, (SA40) Purple	8564E (84125C)	1771	20-Oct-09
Hewlett Packard	Microwave Preamplifier, 1-26.5GHz	8449B	1780	05-Mar-10
A.H. Systems	Blue System Horn, 18-40GHz	SAS-574, p/n: 2581	2159	17-Mar-10
A.H. Systems	Purple System Horn, 18-40GHz	SAS-574, p/n: 2581	2160	17-Mar-10

Appendix A Test Equipment Calibration Data

Appendix B Test Data

T75950 (Transmitter measurements) 60 Pages T75951 (receiver spurious) 6 Pages

© Ellio	tt.	
	J [*] company	EMC Test Data
Client	Proxim Corporation	Job Number: J75847
Model	PROXMB82 802.11abgn miniPCI module (3x3)	T-Log Number: T75950
Contort	: Ivovlo Tenkov	Account Manager: -
Emissions Standard(s):	lvaylo Tankov FCC Part 15 Subpart C (15.247), RSS 210	Class: N/A
Immunity Standard(s):	N/A	Environment: N/A
	EMC Test Da	ita
	For The	
	Proxim Corpora	ation
	Model	
	PROXMB82 802.11abgn miniPCI r	module (3x3)
	Date of Last Test: 9/23/20	009

Client: Proxim Corporation Job Number: J75847 Model: PROXMB82 802.11 abgn miniPCI module (3x3) T-Log Number: T75950 Contact: Ivaylo Tankov Account Manager: Standard: FCC Part 15 Subpart C (15.247), RSS 210 Class: N/A RSS 210 and FCC 15.247 (DTS) Output Power MIMO and Smart Antenna Systems - 2.4GHz

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 9/2/2009 Test Engineer: Mehran Birgani/Rafael Varelas Test Location: FT Chamber #4 Config. Used: 1 Config Change: None Host Unit Voltage 120V/60Hz

Summary of Results

Note: All other conducted measurements are covered by the original test report/data as those measurements were made at a power setting equal to, or higher, than those power levels used with the high gain antennas to be covered by this permissive change / reassessment.

Run # Test Performed Limit Pass / Fail Result / Margin Sector Antenna (max Gain of 17dBi) Output Power Chain A 15.247(b) Pass Power:-1.9 dBm / 0.001 W EIRP: 0.032 W 2 (802.11g) Output Power Chain A 15.247(b) Pass Power: -2.3dBm / 0.0006 W EIRP: 0.029 W 3 (802.11n HT20) Output Power Chain A+B+C 15.247(b) Pass Power: 1.9 dBm / 0.0027 W EIRP: 0.029 W 4 (802.11n HT20) Output Power Chain A+B+C 15.247(b) Pass Power: 2.8 dBm / 0.0027 W EIRP: 0.077 W 9 A (802.11n HT40) Output Power Chain A+B+C 15.247(b) Pass Power: 2.8 dBm / 0.002 W EIRP: 0.096 W 9 A (802.11n HT40) Output Power Chain A+B+C 15.247(b) Pass Power: 8.2 dBm / 0.007 W EIRP: 0.653 W 2 (802.11g) Output Power Chain A 15.247(b) Pass Power: 7.4 dBm / 0.005 W EIRP: 0.545 W 3 (802.11n HT20) Output Power Chain A+B+C 15.247(b) Pass EIRP: 0.545 W 3 (802.11n HT20) Output Power Chain A+B+C 15.247(b) Pass EIRP: 1.7 W 4 (802.11n HT40) Output Power Chain A+B+C 15.247(b) Pass										
1 (802.11b) Output Power Chain A 15.247(b) Pass Power:-1.9 dBm / 0.001 W EIRP: 0.032 W 2 (802.11g) Output Power Chain A 15.247(b) Pass Power: -2.3dBm / 0.0006 W EIRP: 0.029 W 3 (802.11n HT20) Output Power Chain A+B+C 15.247(b) Pass Power: 1.9 dBm / 0.0027 W EIRP: 0.029 W 4 (802.11n HT20) Output Power Chain A+B+C 15.247(b) Pass Power: 2.8 dBm / 0.0027 W EIRP: 0.077 W 9 A (802.11n HT40) Output Power Chain A+B+C 15.247(b) Pass Power: 2.8 dBm / 0.002 W EIRP: 0.096 W 9 A (802.11n HT40) Output Power Chain A 15.247(b) Pass Power: 8.2 dBm / 0.007 W EIRP: 0.096 W 9 A (802.11g) Output Power Chain A 15.247(b) Pass Power: 7.4 dBm / 0.005 W EIRP: 0.545 W 2 (802.11g) Output Power Chain A 15.247(b) Pass Power: 12.4 dBm / 0.017 W EIRP: 0.545 W 3 (802.11n HT20) Output Power Chain A+B+C 15.247(b) Pass Power: 12.4 dBm / 0.017 W EIRP: 1.7 W 4 (802 11n HT40) Output Power Chain A+B+C 15.247(b) Pass Power: 12.8 dBm / 0.019 W	Run #	Test Performed	Limit	Pass / Fail	Result / Margin					
1 (802.11b) Output Power Chain A 15.247(b) Pass EIRP: 0.032 W 2 (802.11g) Output Power Chain A 15.247(b) Pass Power: -2.3dBm / 0.0006 W 3 (802.11n HT20) Output Power Chain A+B+C 15.247(b) Pass Power: 1.9 dBm / 0.0027 W 4 (802.11n HT20) Output Power Chain A+B+C 15.247(b) Pass Power: 2.8 dBm / 0.0027 W EIRP: 0.032 W Output Power Chain A+B+C 15.247(b) Pass Power: 1.9 dBm / 0.0027 W 4 (802.11n HT40) Output Power Chain A+B+C 15.247(b) Pass Power: 2.8 dBm / 0.002 W EIRP: 0.096 W Pass Power: 2.8 dBm / 0.007 W EIRP: 0.096 W 1 (802.11b) Output Power Chain A 15.247(b) Pass Power: 8.2 dBm / 0.007 W 2 (802.11g) Output Power Chain A 15.247(b) Pass Power: 7.4 dBm / 0.005 W 2 (802.11g) Output Power Chain A 15.247(b) Pass Power: 12.4 dBm / 0.017 W 3 (802.11n HT20) Output Power Chain A+B+C 15.247(b) Pass Power: 12.4 dBm / 0.017 W 4 (802 11n HT40) Output Power Chain A+B+C	Sector Antenna (max Gain of 17dBi)									
2 (802.11g) Output Power Chain A 15.247(b) Pass Power: -2.3dBm / 0.0006 W EIRP: 0.029 W 3 (802.11n HT20) Output Power Chain A+B+C 15.247(b) Pass Power: 1.9 dBm / 0.0027 W EIRP: 0.077 W 4 (802.11n HT40) Output Power Chain A+B+C 15.247(b) Pass Power: 2.8 dBm / 0.0027 W EIRP: 0.077 W 1 (802.11n HT40) Output Power Chain A+B+C 15.247(b) Pass Power: 2.8 dBm / 0.002 W EIRP: 0.096 W 1 (802.11b) Output Power Chain A 15.247(b) Pass Power: 8.2 dBm / 0.007 W EIRP: 0.653 W 2 (802.11g) Output Power Chain A 15.247(b) Pass Power: 7.4 dBm / 0.005 W EIRP: 0.653 W 3 (802.11n HT20) Output Power Chain A 15.247(b) Pass Power: 12.4 dBm / 0.017 W EIRP: 0.545 W 3 (802.11n HT20) Output Power Chain A+B+C 15.247(b) Pass Power: 12.4 dBm / 0.017 W EIRP: 1.7 W 4 (802 11n HT40) Output Power Chain A+B+C 15.247(b) Pass Power: 12.8 dBm / 0.019 W	1 (802 11h)	Output Power Chain A	15.247(b)	Deee	Power:-1.9 dBm / 0.001 W					
2 (802.11g) Output Power Chain A 15.247(b) Pass EIRP: 0.029 W 3 (802.11n HT20) Output Power Chain A+B+C 15.247(b) Pass Power: 1.9 dBm / 0.0027 W 4 (802.11n HT40) Output Power Chain A+B+C 15.247(b) Pass Power: 2.8 dBm / 0.002 W EIRP: 0.077 W Output Power Chain A+B+C 15.247(b) Pass Power: 2.8 dBm / 0.002 W Panel Antenna (Max gain of 20dBi) Output Power Chain A 15.247(b) Pass Power: 3.2 dBm / 0.007 W 1 (802.11b) Output Power Chain A 15.247(b) Pass Power: 7.4 dBm / 0.007 W 2 (802.11g) Output Power Chain A 15.247(b) Pass Power: 7.4 dBm / 0.005 W 3 (802.11n HT20) Output Power Chain A 15.247(b) Pass Power: 12.4 dBm / 0.017 W 3 (802.11n HT20) Output Power Chain A+B+C 15.247(b) Pass Power: 12.4 dBm / 0.017 W EIRP: 1.7 W A (802 11n HT40) Output Power Chain A+B+C 15.247(b) Pass Power: 12.8 dBm / 0.019 W	1 (002.110)		15.247 (D)	F 855	EIRP: 0.032 W					
3 (802.11n HT20) Output Power Chain A+B+C 15.247(b) Pass Power: 1.9 dBm / 0.0027 W EIRP: 0.077 W 4 (802.11n HT40) Output Power Chain A+B+C 15.247(b) Pass Power: 2.8 dBm / 0.002 W EIRP: 0.096 W Panel Antenna (Max gain of 20dBi) 0utput Power Chain A 15.247(b) Pass Power: 8.2 dBm / 0.007 W EIRP: 0.096 W 1 (802.11b) Output Power Chain A 15.247(b) Pass Power: 8.2 dBm / 0.007 W EIRP: 0.653 W 2 (802.11g) Output Power Chain A 15.247(b) Pass Power: 7.4 dBm / 0.005 W EIRP: 0.545 W 3 (802.11n HT20) Output Power Chain A+B+C 15.247(b) Pass Power: 12.4 dBm / 0.017 W EIRP: 1.7 W 4 (802 11n HT40) Output Power Chain A+B+C 15.247(b) Pass Power: 12.8 dBm / 0.019 W	2 (802 11a)	Output Power Chain A	15.247(b)	Pass	Power: -2.3dBm / 0.0006 W					
3 (802.11n HT20) Output Power Chain A+B+C 15.247(b) Pass EIRP: 0.077 W 4 (802.11n HT40) Output Power Chain A+B+C 15.247(b) Pass Power: 2.8 dBm / 0.002 W Panel Antenna (Max gain of 20dBi) Image: Comparison of 20dBi Image: Comparison of 20dBi Power: 8.2 dBm / 0.007 W 1 (802.11b) Output Power Chain A 15.247(b) Pass Power: 8.2 dBm / 0.007 W 2 (802.11g) Output Power Chain A 15.247(b) Pass Power: 7.4 dBm / 0.005 W 3 (802.11n HT20) Output Power Chain A+B+C 15.247(b) Pass Power: 12.4 dBm / 0.017 W 3 (802.11n HT20) Output Power Chain A+B+C 15.247(b) Pass Power: 12.4 dBm / 0.017 W 4 (802 11n HT40) Output Power Chain A+B+C 15.247(b) Pass Power: 12.4 dBm / 0.017 W	2 (002.11g)		13.247(0)	r ass	EIRP: 0.029 W					
A (802.11n HT40) Output Power Chain A+B+C 15.247(b) Pass Power: 2.8 dBm / 0.002 W EIRP: 0.096 W Panel Antenna (Max gain of 20dBi) Output Power Chain A 15.247(b) Pass Power: 8.2 dBm / 0.007 W EIRP: 0.653 W 1 (802.11b) Output Power Chain A 15.247(b) Pass Power: 7.4 dBm / 0.007 W EIRP: 0.653 W 2 (802.11g) Output Power Chain A 15.247(b) Pass Power: 7.4 dBm / 0.005 W EIRP: 0.545 W 3 (802.11n HT20) Output Power Chain A+B+C 15.247(b) Pass Power: 12.4 dBm / 0.017 W EIRP: 1.7 W 4 (802.11n HT40) Output Power Chain A+B+C 15.247(b) Pass Power: 12.8 dBm / 0.019 W	3 (802 11n HT20)	Output Power Chain A+B+C	15 247(h)	Pass	Power: 1.9 dBm / 0.0027 W					
4 (802.11n H140) Output Power Chain A+B+C 15.247(b) Pass EIRP: 0.096 W Panel Antenna (Max gain of 20dBi) Output Power Chain A 15.247(b) Pass Power:8.2 dBm / 0.007 W 1 (802.11b) Output Power Chain A 15.247(b) Pass Power: 8.2 dBm / 0.007 W 2 (802.11g) Output Power Chain A 15.247(b) Pass Power: 7.4 dBm / 0.005 W 3 (802.11n HT20) Output Power Chain A+B+C 15.247(b) Pass Power: 12.4 dBm / 0.017 W 4 (802 11n HT40) Output Power Chain A+B+C 15.247(b) Pass Power: 12.4 dBm / 0.017 W	0 (002.11111120)		10.247(0)	1 835						
Panel Antenna (Max gain of 20dBi) Panel Antenna (Max gain of 20dBi) 1 (802.11b) Output Power Chain A 15.247(b) Pass Power: 8.2 dBm / 0.007 W EIRP: 0.653 W 2 (802.11g) Output Power Chain A 15.247(b) Pass Power: 7.4 dBm / 0.005 W EIRP: 0.545 W 3 (802.11n HT20) Output Power Chain A+B+C 15.247(b) Pass Power: 12.4 dBm / 0.017 W EIRP: 1.7 W 4 (802 11n HT40) Output Power Chain A+B+C 15.247(b) Pass Power: 12.8 dBm / 0.019 W	4 (802 11n HT40)	Output Power Chain A+B+C	15 247(b)	Pass						
1 (802.11b) Output Power Chain A 15.247(b) Pass Power:8.2 dBm / 0.007 W EIRP: 0.653 W 2 (802.11g) Output Power Chain A 15.247(b) Pass Power: 7.4 dBm / 0.005 W EIRP: 0.545 W 3 (802.11n HT20) Output Power Chain A+B+C 15.247(b) Pass Power: 12.4 dBm / 0.017 W EIRP: 1.7 W 4 (802.11n HT40) Output Power Chain A+B+C 15.247(b) Pass Power: 12.8 dBm / 0.019 W	, , , , , , , , , , , , , , , , , , ,	•	10.247(0)	1 835	EIRP: 0.096 W					
1 (802.11b) Output Power Chain A 15.247(b) Pass EIRP: 0.653 W 2 (802.11g) Output Power Chain A 15.247(b) Pass Power: 7.4 dBm / 0.005 W 3 (802.11n HT20) Output Power Chain A+B+C 15.247(b) Pass Power: 12.4 dBm / 0.017 W 4 (802 11n HT40) Output Power Chain A+B+C 15.247(b) Pass Power: 12.4 dBm / 0.017 W EIRP: 1.7 W Power: 12.8 dBm / 0.019 W Power: 12.8 dBm / 0.019 W	Panel Antenna (Max ga	in of 20dBi)								
2 (802.11g) Output Power Chain A 15.247(b) Pass Power: 7.4 dBm / 0.005 W EIRP: 0.545 W 3 (802.11n HT20) Output Power Chain A+B+C 15.247(b) Pass Power: 12.4 dBm / 0.017 W EIRP: 1.7 W 4 (802.11n HT40) Output Power Chain A+B+C 15.247(b) Pass Power: 12.8 dBm / 0.019 W	1 (802 11h)	Output Power Chain A	15 247(b)	Pass	Power:8.2 dBm / 0.007 W					
2 (802.11g) Output Power Chain A 15.247(b) Pass EIRP: 0.545 W 3 (802.11n HT20) Output Power Chain A+B+C 15.247(b) Pass Power: 12.4 dBm / 0.017 W 4 (802.11n HT40) Output Power Chain A+B+C 15.247(b) Pass Power: 12.8 dBm / 0.019 W	1 (002.110)		10.247(0)	1 835						
3 (802.11n HT20) Output Power Chain A+B+C 15.247(b) Pass Power: 12.4 dBm / 0.017 W EIRP: 1.7 W 4 (802.11n HT40) Output Power Chain A+B+C 15.247(b) Pass Power: 12.8 dBm / 0.019 W	2 (802 11a)	Output Power Chain A	15 247(h)	Pass	Power: 7.4 dBm / 0.005 W					
3 (802.11n HT20) Output Power Chain A+B+C 15.247(b) Pass EIRP: 1.7 W 4 (802.11n HT40) Output Power Chain A+B+C 15.247(b) Pass Power: 12.8 dBm / 0.019 W	2 (002.119)		10.247(0)	1 055						
4 (802 11n HT40) Output Power Chain A+B+C 15 247(b) Pass Power: 12.8 dBm / 0.019 W	3 (802 11n HT20)	Output Power Chain A+B+C	15 247(h)	Pass						
4 (802 11n H140) Cultout Power Chain A+B+C 15 247(b) Pass	0 (002.1111120)		10.247(0)	1 000						
FIRP: 1.92 W	4 (802 11n HT40)	Output Power Chain A+B+C	15 247(b)	Pass						
			10.247(0)	1 033	EIRP: 1.92 W					

EMC Test Data

	An ZAZAO company		
Client:	Proxim Corporation	Job Number:	J75847
Model	PROXMB82 802.11abgn miniPCI module (3x3)	T-Log Number:	T75950
wouer.	FROAMBOZ 602. Habyi Hillifo Hidule (3x3)	Account Manager:	-
Contact:	Ivaylo Tankov		
Standard:	FCC Part 15 Subpart C (15.247), RSS 210	Class:	N/A

General Test Configuration

The EUT was connected to the spectrum analyzer or power meter via a suitable attenuator. All measurements were made on each chain separately. Plots are provided for the channel with the highest output power for MIMO modes and for the channels with the highest power for each antenna type for legacy (MISO) modes.

All measurements have been corrected to allow for the external attenuators used.

Ambient Conditions:	Temperature:	22.4 °C
	Rel. Humidity:	43 %

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Measurement Notes

All measurements made with a 20dB or 10dB pad between analyzer and rf port. No correction made for the attenuator as it simulates the cables losses. The pad is also used because the rf control utility for testing cannot set the power below 0dBm so the attenuator adjusts for this fact. The actual drivers used in normal operation can set power below 0dBm.

Note 1:	Output power measured using a spectrum analyzer (see plots below) with RBW=1MHz, VB=3 MHz, sample detector, power averaging on (transmitted signal was continuous) and power integration over 40MHz for 20MHz channel bandwidths and 75MHz for 40MHz channel spacings (reference method 1 of FCC DA 02-2138 for U-NII devices, August 30, 2002). Spurious limit becomes -30dBc .
Note 2:	As there is no coherency between chains in the MIMO modes the total EIRP is the sum of the individual EIRPs and effective antenna gain equals the eirp divide by the sum of the power on each chain. The total power is the sum of the individual chain powers.
Note 3:	Power setting is the software power setting. The attenuator was placed between the rf port and antenna. The maximum power level
Note 4:	The power limit is based on point-point use with the high gain antennas. The power limit is 30dBm minus 1dB for every 3dB the antenna gain exceeds 6dBi.

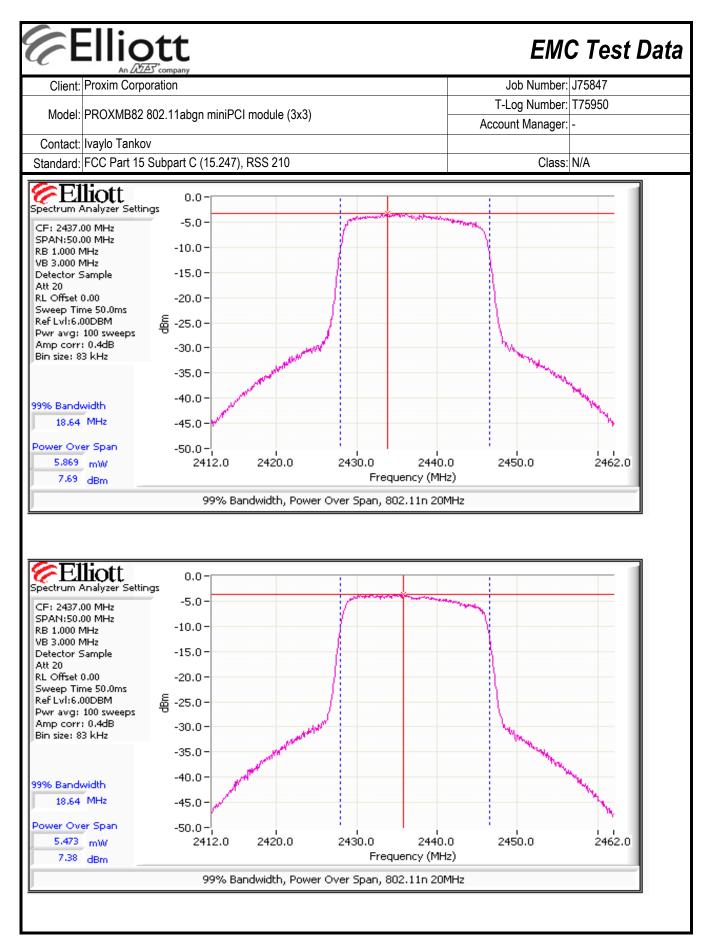
An ATAS company							
Client: Proxim Corporation					J	ob Number:	J75847
		vdulo (2×2)			T-L	og Number:	T75950
Model: PROXMB82 802.11ab	gn miniPCI ma	oulle (3X3)			Accour	nt Manager:	-
Contact: Ivaylo Tankov							
Standard: FCC Part 15 Subpart (C (15.247), RS	S 210				Class:	N/A
							l
Run #1: Output Power - 802.11b							
Transmitted signal on chai	n is coherent?	N/A					
Ŭ							
Power levels for the highest pow							
Nith 17dBi antenna the maximum of					t-to-multipoint	the maximu	m is 19dBm.
2412 MHz Sector	Chain 1	Chain 2	Chain 3	Chain 4	Total Across	All Chains	Limit
Power Setting (+20dB pad) ^{Note 3}	18.0						
Dutput Power (dBm) Note 1	-3.3				-3.3 dBm	0.000 W	19.0 dBm 0.079
Antenna Gain (dBi) Note 2	17				40 7 10	17.0 dBi	Pass
eirp (dBm) ^{Note 2}	13.7				13.7 dBm	0.023 W	
2437 MHz Sector	Chain 1	Choir 0	Chair 2	Chain 1	1		1
	Chain 1	Chain 2	Chain 3	Chain 4	Total Across	All Chains	Limit
Power Setting (+20dB pad) ^{Note 3} Dutput Power (dBm)	-2.0				10 dDm	0.001 W	19.0 dBm 0.079
Antenna Gain (dBi) Note 2	-2.0				-1.9 dBm	17.0 dBi	•
eirp (dBm) Note 2	15.05				15.1 dBm	0.032 W	Pass
אויק (מטווו)	10.00					0.002 11	1
2462 MHz Sector	Chain 1	Chain 2	Chain 3	Chain 4			
Power Setting (+20dB pad) ^{Note 3}	18.5				Total Across	All Chains	Limit
Dutput Power (dBm) ^{Note 1}	-3.0				-3.0 dBm	0.000 W	19.0 dBm 0.079
Antenna Gain (dBi) ^{Note 2}	17					17.0 dBi	Pass
eirp (dBm) Note 2	13.98				14.0 dBm	0.025 W	F d55
Elliott -10	<u>.</u>						
Spectrum Analyzer Settings			~	~~i~~	-		
-15 CF: 2437.00 MHz	.0-		- 1		7		
SPAN:50.00 MHz -20	.0-		- J.*		-r\		
RB 1.000 MHz VB 3.000 MHz -25	.0-		- (- X		
Detector Sample _30							
Att 10							
Sweep Time 50.0ms			1		1		
Ref Lvl:0.00DBM F-40 Pwr avg: 100 sweeps	.0-		1 :		1		
Amp corr: 0.4dB -45	.0-						
Bin size: 83 kHz -50	.0-	m					
-55		NV			l	m.	
		·				N ₁	
99% Bandwidth -60 15,97 MHz							
	.0-						My I
-65			1		1		*
-b5 Power Over Span -70	.o-¦		1	1		1	
Power Over Span -70 0.638 mW		420.0	2430.0	2440		50.0	2462.0
-b5 Power Over Span -70		2420.0		2440 2440 quency (MF		50.0	2462.0

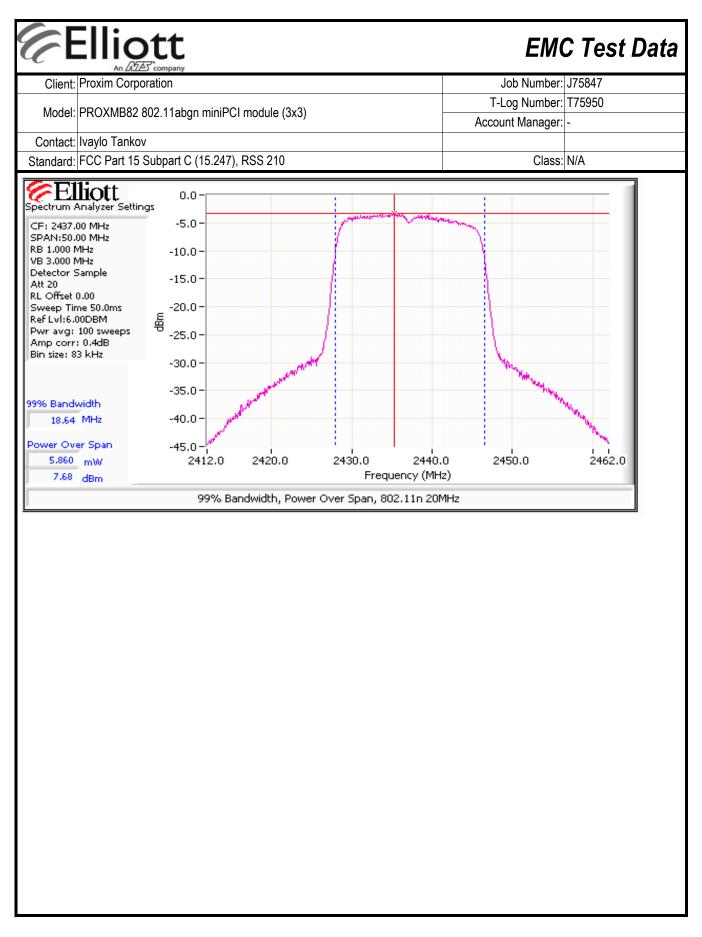
Client: Proxim Corporation						J	lob Number:	J75847	
Model: PROXMB82 802.11abgn miniPCI module (3x3)						T-L	og Number:	T75950	
	ouz. Habyn					Accou	nt Manager:	-	
Contact: Ivaylo Tanko	V								
Standard: FCC Part 15 Subpart C (15.247), RSS 210							Class:	N/A	
ower levels for the hig	hest power	tested - par	nel antenna						
Vith 20dBi antenna the m						t-to-multipoint	the maximu	m is 16dBm.	
2412 MHz Pan		Chain 1	Chain 2	Chain 3	Chain 4	Total Acros	s All Chains	Lir	nit
Power Setting (+10dB pad	d) ^{Nole o}	15.5	-			0.7 dD	0.000 \M	40.0 JDm	0.040 \
Dutput Power (dBm) ^{Note 1} Intenna Gain (dBi) ^{Note 2}		3.7 20				3.7 dBm	0.002 W 20.0 dBi	16.0 dBm	0.040 V
irp (dBm) Note 2		20				23.7 dBm	20.0 dBi 0.234 W	Pa	SS
		20.1				20.7 0011	0.207 88	I	
2437 MHz Pan	el	Chain 1	Chain 2	Chain 3	Chain 4	T .() A			. 11
ower Setting (+10dB pad	d) ^{Note 3}	19.0				Total Across	s All Chains	Lir	nıt
)utput Power (dBm) ^{Note 1}	,	8.2				8.2 dBm	0.007 W	16.0 dBm	0.040 V
ntenna Gain (dBi) Note 2		20					20.0 dBi	Pa	S S
irp (dBm) ^{Note 2}		28.2				28.2 dBm	0.653 W	10	00
2462 MHz Pan	6	Chain 1	Chain 2	Chain 3	Chain 4	1			
ower Setting (+10dB page		17.5	Ondin 2	onano	Undin 4	Total Across	s All Chains	Lir	nit
Output Power (dBm) Note 1	u)	5.7				5.7 dBm	0.004 W	16.0 dBm	0.040 V
ntenna Gain (dBi) Note 2		20					20.0 dBi		
irp (dBm) ^{Note 2}		25.7				25.7 dBm	0.375 W	Pa	SS
CF: 2437.00 MHz SPAN:50.00 MHz SPAN:50.00 MHz RB 1.000 MHz VB 3.000 MHz Detector Sample Att 20 RL Offset 0.00 Sweep Time 50.0ms Ref Lv1:9.00DBM Pwr avg: 100 sweeps Amp corr: 0.4dB Bin size: 83 kHz 99% Bandwidth 16.06 MHz Power Over Span	-5.0 -10.0 -15.0 -20.0 -25.0 -35.0 -35.0 -40.0 -45.0 -55.0 -55.0 -60.0		420.0	2430.0	2440			2462.0	
0.500	24			Fre	quency (MH	łz)	50.0	2462.0	
6.529 mW 8.15 dBm		00% Ra	ndwidth, Pov	wer Over Sp	an 802.11b				
		9976 Da							

	Company						1750 17
Client: Proxim Corpo	Proxim Corporation						J75847
Model: PROXMB82	802 11abon	miniPCI mo	dule (3x3)			T-Log Number:	
						Account Manager:	-
Contact: Ivaylo Tankov	V						
Standard: FCC Part 15	Subpart C (15.247), RS	S 210			Class:	N/A
Run #2: Output Power -	802.11g						
Transmitted signa	al on chain is	coherent?	N/A				
Power levels for the high							
						t-to-multipoint the maximu	m is 19dBm.
2412 MHz Secto		Chain 1	Chain 2	Chain 3	Chain 4	Total Across All Chains	Limit
Power Setting (+20dB pac		17.5					
Dutput Power (dBm) Note 1		-4.2	-			-4.2 dBm 0.000 W	19.0 dBm 0.079 V
Antenna Gain (dBi) ^{Note 2} eirp (dBm) ^{Note 2}		17 12.8				17.0 dBi 12.8 dBm 0.019 W	Pass
ягр (ubm)		12.0				12.0 UDIII 0.019 W	<u> </u>
2437 MHz Secto	or	Chain 1	Chain 2	Chain 3	Chain 4		
Power Setting (+20dB pac		19.0		- ·•··· •		Total Across All Chains	Limit
Dutput Power (dBm) Note 1	,	-2.4				-2.4 dBm 0.0006 W	19.0 dBm 0.079 V
Antenna Gain (dBi) Note 2		17				17.0 dBi	
eirp (dBm) Note 2		14.64	-100	-100	-100	14.6 dBm 0.029 W	Pass
2462 MHz Secto		Chain 1	Chain 2	Chain 3	Chain 4	Total Across All Chains	Limit
Power Setting (+20dB pac	d) ^{Note 3}	17.5					
Dutput Power (dBm) Note 1		-4.3				-4.3 dBm 0.000 W	19.0 dBm 0.079 W
Antenna Gain (dBi) ^{Note 2}		17				17.0 dBi	Pass
eirp (dBm) Note 2		12.74				12.7 dBm 0.019 W	
Elliott	-10.0	_					
Spectrum Analyzer Settin	igs -15.0			man	- when and a second	many .	
CF: 2437.00 MHz SPAN:50.00 MHz	-15.0			1			
RB 1.000 MHz	-20.0	-		1			
VB 3.000 MHz Detector Sample	-25.0	_					
Att 20							
RL Offset 0.00 Sweep Time 50.0ms	-30.0						
Ref Lvl:9.00DBM	튪 -35.0	-		1			
Pwr avg: 100 sweeps Amp corr: 0.4dB	-40.0		الدين.	1		× .	
Bin size: 83 kHz			and the party of			and they	
	-45.0	-	Maria			the second second	
2006 D محمل سنطاله	-50.0	لمعجبو					wy
99% Bandwidth 17.47 MHz		when					Mar 1
	-55.0	-					The second se
Power Over Span	-60.0					;	
	24	12.0 2	420.0	2430.0	2440		2462.0
0.582 mW				—	autor at 1871	1-3	
0.582 mW -2.35 dBm			ndwidth, Pov		quency (MH		

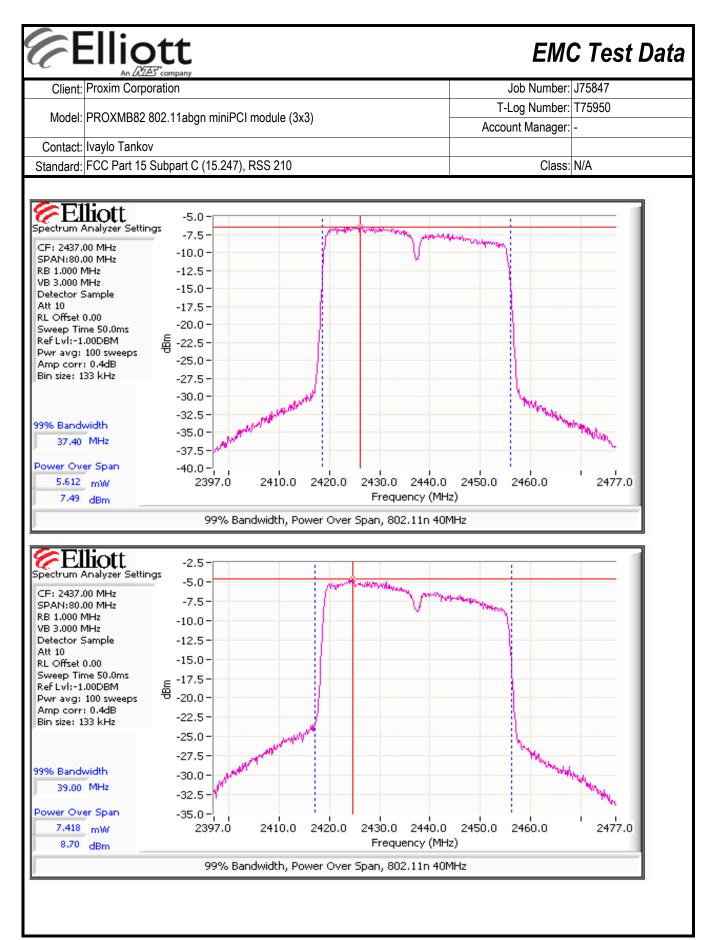
	pany							C Test Dat	
Client: Proxim Corporation	Proxim Corporation						Job Number: J75847		
Model: PROXMB82 802.1	PROXMB82 802.11abgn miniPCI module (3x3)						T-Log Number: T75950 Account Manager: -		
Contact: Ivaylo Tankov									
Standard: FCC Part 15 Subpa	art C (1	15.247), RS	S 210				Class:	N/A	
ower levels for the highest p	ower	tested - pa	nel antenna						
ith 20dBi antenna the maximu	um out <u>j</u>			nt is 25dBm	and for poin	t-to-multipoint	the maximu	m is 16dBm.	
2412 MHz Panel)	Chain 1	Chain 2	Chain 3	Chain 4	Total Acros	s All Chains	Limit	
wer Setting (+10dB pad) ^{Note 3})	14.5	-						
itput Power (dBm) ^{Note 1} tenna Gain (dBi) ^{Note 2}		2.3 20	-			2.3 dBm	0.002 W 20.0 dBi	16.0 dBm 0.040	
p (dBm) ^{Note 2}		20				22.3 dBm	20.0 dBi 0.170 W	Pass	
		22.01					0.170 W	1	
2437 MHz Panel		Chain 1	Chain 2	Chain 3	Chain 4	Total Astra	s All Chains	1 :	
wer Setting (+10dB pad) ^{Note 3}	3	19.0				Total Acros		Limit	
Itput Power (dBm) ^{Note 1}		7.4				7.4 dBm	0.005 W	16.0 dBm 0.040	
tenna Gain (dBi) Note 2		20				07.4.15	20.0 dBi	Pass	
p (dBm) ^{Note 2}		27.36				27.4 dBm	0.545 W	l	
2462 MHz Panel		Chain 1	Chain 2	Chain 3	Chain 4				
wer Setting (+10dB pad) ^{Note 3}	3	14.5				Total Acros	s All Chains	Limit	
tput Power (dBm) Note 1		2.2				2.2 dBm	0.002 W	16.0 dBm 0.040	
tenna Gain (dBi) ^{Note 2}		20					20.0 dBi	Pass	
p (dBm) ^{Note 2}		22.16				22.2 dBm	0.164 W	1 466	
VB 3.000 MHz Detector Sample Att 20 RL Offset 0.00 Sweep Time 50.0ms Ref Lvl:9.00DBM Pwr avg: 100 sweeps Amp corr: 0.4dB Bin size: 83 kHz	0.0 - -5.0 - -10.0 - -15.0 - -20.0 - -25.0 - -30.0 - -35.0 -	-	Marward						
1996 Bandwidth 17,47 MHz	-40.0 - -45.0 - -50.0 - 24	mark	420.0	2430.0	2440	.0 24	50.0	2462.0	
7.36 dBm				Fre	quency (MH	łz)			
		00% Ba	ndwidth. Pov	ver Over Sp	an 802.11g				
		9976 Da	,						

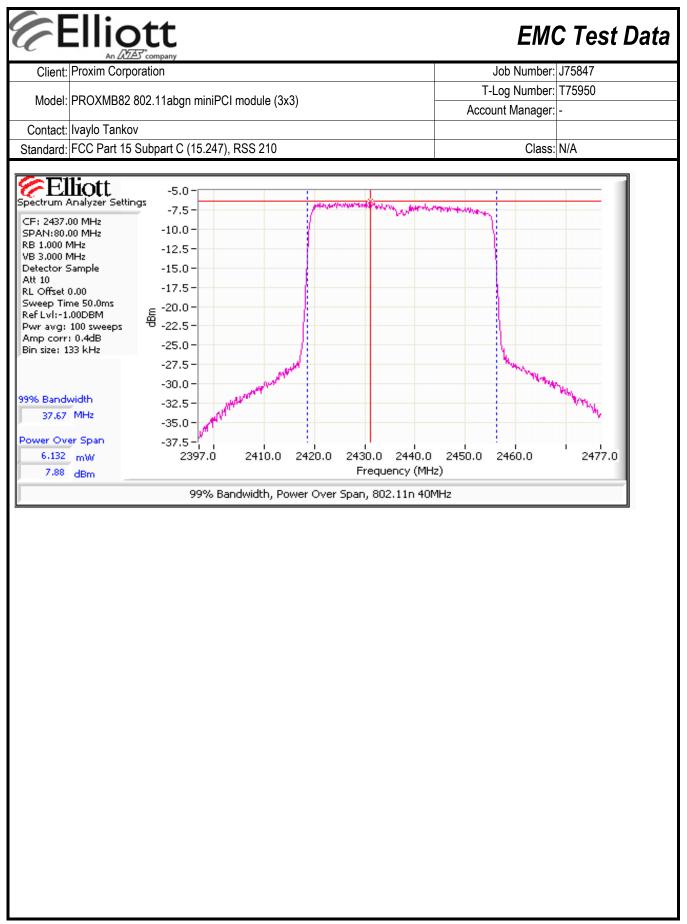
	An ATAS company							
Client:	Proxim Corporation					,	lob Number:	J75847
	•					T-Log Number:		T75950
Model:	PROXMB82 802.11abgn miniPCI module (3x3)						nt Manager:	
Contact:	Ivaylo Tankov							
Standard:	FCC Part 15 Subpart C (15.247), RSS		Class:	N/A			
		,				l		
Run #3: Ou	itput Power - 802.11n H	Т20						
	nsmitted signal on chain i		No					
	Ū							
Power level	Is for the highest power	tested - sec	tor antenna					
	antenna the maximum out				1	-to-multipoint	the maximu	m is 19dBm.
	12 MHz Sector	Chain 1	Chain 2	Chain 3	Chain 4	Total Acros	s All Chains	Limit
Power Settin	ng (+20dB pad) ^{Note 3}		17.0					
Output Powe	er (dBm) ^{Note 1}	-5.0	-5.6	-6.58		-0.9 dBm	0.001 W	19.0 dBm 0.079 W
Antenna Gai	in (dBi) ^{Note 2}	17.0	17.0	17.0			17.0 dBi	Pass
eirp (dBm) ^N	lote 2	12	11.4	10.42		16.1 dBm	0.041 W	1 400
				a		Π		
	37 MHz Sector	Chain 1	Chain 2	Chain 3	Chain 4	Total Acros	s All Chains	Limit
Power Settin	ng (+20dB pad) ^{Note 3}		19.0					
Output Powe	er (dBm) Note 1	-2.3	-2.7	-3.9		1.9 dBm	0.002 W	19.0 dBm 0.079 W
Antenna Gai	in (dBi) ^{Note 2}	17.0	17.0	17.0			17.0 dBi	Pass
eirp (dBm) ^N	lote 2	14.7	14.3	13.1		18.9 dBm	0.077 W	1 400
						T		1
	62 MHz Sector	Chain 1	Chain 2	Chain 3	Chain 4	Total Acros	s All Chains	Limit
Power Settin	ng (+20dB pad) ^{Note 3}		17.0		Chain 4		s All Chains	Limit
Power Settin Output Powe	ng (+20dB pad) ^{Note 3} er (dBm) ^{Note 1}	-4.7	17.0 -5.8	-6.3	Chain 4	Total Acros	0.001 W	Limit 19.0 dBm 0.079 W
Power Settin Output Powe Antenna Gai	ng (+20dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 2}	-4.7 17.0	17.0 -5.8 17.0	-6.3 17.0	Chain 4	-0.8 dBm	0.001 W 17.0 dBi	19.0 dBm 0.079 W
Power Settin Output Powe	ng (+20dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 2}	-4.7	17.0 -5.8	-6.3	Chain 4		0.001 W	
Power Settin Output Powe Antenna Gai eirp (dBm) ^{Ne}	ng (+20dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 2} ote 2	-4.7 17.0 12.3	17.0 -5.8 17.0 11.2	-6.3 17.0	Chain 4	-0.8 dBm	0.001 W 17.0 dBi	19.0 dBm 0.079 W
Power Settin Output Powe Antenna Gai eirp (dBm) ^N	ng (+20dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 2} lote 2	-4.7 17.0 12.3 tested - par	17.0 -5.8 17.0 11.2 nel antenna	-6.3 17.0 10.7		-0.8 dBm 16.2 dBm	0.001 W 17.0 dBi 0.042 W	19.0 dBm 0.079 W Pass
Power Settin Output Powe Antenna Gai eirp (dBm) ^N Power level With 20dBi a	ng (+20dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 2} lote 2 Is for the highest power antenna the maximum out	-4.7 17.0 12.3 tested - pan	17.0 -5.8 17.0 11.2 nel antenna r point-to-poi	-6.3 17.0 10.7 nt is 25dBm	and for point	-0.8 dBm 16.2 dBm	0.001 W 17.0 dBi 0.042 W	19.0 dBm 0.079 W Pass
Power Settin Output Powe Antenna Gai eirp (dBm) ^{N Power level With 20dBi a 24}	ng (+20dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 2} lote 2 Is for the highest power antenna the maximum out I12 MHz Panel	-4.7 17.0 12.3 tested - par	17.0 -5.8 17.0 11.2 nel antenna r point-to-poi Chain 2	-6.3 17.0 10.7		-0.8 dBm 16.2 dBm	0.001 W 17.0 dBi 0.042 W	19.0 dBm 0.079 W Pass
Power Settin Output Power Antenna Gai eirp (dBm) [™] Power level With 20dBi a 24 Power Settin	ng (+20dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 2} ote 2 Is for the highest power antenna the maximum out I12 MHz Panel ng (+10dB pad) ^{Note 3}	-4.7 17.0 12.3 tested - pan tput power fo Chain 1	17.0 -5.8 17.0 11.2 nel antenna r point-to-poi Chain 2 14.0	-6.3 17.0 10.7 nt is 25dBm Chain 3	and for point	-0.8 dBm 16.2 dBm -to-multipoint Total Acros	0.001 W 17.0 dBi 0.042 W the maximu s All Chains	19.0 dBm 0.079 W Pass m is 16dBm. Limit
Power Settin Output Power Antenna Gai eirp (dBm) [™] Power level With 20dBi a 24 Power Settin Output Power	ng (+20dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 2} ote 2 Is for the highest power antenna the maximum out I12 MHz Panel ng (+10dB pad) ^{Note 3} er (dBm) ^{Note 1}	-4.7 17.0 12.3 tested - par put power fo Chain 1 1.9	17.0 -5.8 17.0 11.2 nel antenna r point-to-poi Chain 2 14.0 1.8	-6.3 17.0 10.7 nt is 25dBm Chain 3 0.74	and for point	-0.8 dBm 16.2 dBm -to-multipoint Total Acros	0.001 W 17.0 dBi 0.042 W the maximu s All Chains 0.004 W	19.0 dBm 0.079 W Pass m is 16dBm.
Power Settin Output Power Antenna Gai eirp (dBm) ^N Power level With 20dBi a 24 Power Settin Output Power Antenna Gai	ng (+20dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 2} lote 2 ls for the highest power antenna the maximum out l12 MHz Panel ng (+10dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 2}	-4.7 17.0 12.3 tested - pan tput power fo Chain 1 1.9 20.0	17.0 -5.8 17.0 11.2 nel antenna r point-to-poi Chain 2 14.0 1.8 20.0	-6.3 17.0 10.7 nt is 25dBm Chain 3 0.74 20.0	and for point	-0.8 dBm 16.2 dBm -to-multipoint Total Across 6.3 dBm	0.001 W 17.0 dBi 0.042 W the maximu s All Chains 0.004 W 20.0 dBi	19.0 dBm 0.079 W Pass m is 16dBm. Limit
Power Settin Output Power Antenna Gai eirp (dBm) [™] Power level With 20dBi a 24 Power Settin	ng (+20dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 2} lote 2 ls for the highest power antenna the maximum out l12 MHz Panel ng (+10dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 2}	-4.7 17.0 12.3 tested - par put power fo Chain 1 1.9	17.0 -5.8 17.0 11.2 nel antenna r point-to-poi Chain 2 14.0 1.8	-6.3 17.0 10.7 nt is 25dBm Chain 3 0.74	and for point	-0.8 dBm 16.2 dBm -to-multipoint Total Acros	0.001 W 17.0 dBi 0.042 W the maximu s All Chains 0.004 W	19.0 dBm 0.079 W Pass m is 16dBm. Limit 16.0 dBm 0.040 W
Power Settin Output Power Antenna Gai eirp (dBm) ^{NV} Power level With 20dBi a 24 Power Settin Output Power Antenna Gai eirp (dBm) ^{NV}	ng (+20dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 2} ote 2 Is for the highest power antenna the maximum out 12 MHz Panel ng (+10dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 2}	-4.7 17.0 12.3 tested - pan tput power fo Chain 1 1.9 20.0 21.9	17.0 -5.8 17.0 11.2 nel antenna r point-to-poi Chain 2 14.0 1.8 20.0 21.8	-6.3 17.0 10.7 nt is 25dBm Chain 3 0.74 20.0 20.74	and for point Chain 4	-0.8 dBm 16.2 dBm -to-multipoint Total Across 6.3 dBm 26.3 dBm	0.001 W 17.0 dBi 0.042 W the maximu s All Chains 0.004 W 20.0 dBi 0.425 W	19.0 dBm 0.079 W Pass m is 16dBm. Limit 16.0 dBm 0.040 W
Power Settin Output Power Antenna Gai eirp (dBm) ^{NV} Power level With 20dBi a 24 Power Settin Output Power Antenna Gai eirp (dBm) ^{NV}	ng (+20dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 2} lote 2 Is for the highest power antenna the maximum out 12 MHz Panel ng (+10dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 2} ote 2 137 MHz Panel	-4.7 17.0 12.3 tested - pan tput power fo Chain 1 1.9 20.0	17.0 -5.8 17.0 11.2 nel antenna r point-to-poi Chain 2 14.0 1.8 20.0 21.8 Chain 2	-6.3 17.0 10.7 nt is 25dBm Chain 3 0.74 20.0	and for point	-0.8 dBm 16.2 dBm -to-multipoint Total Across 6.3 dBm 26.3 dBm	0.001 W 17.0 dBi 0.042 W the maximu s All Chains 0.004 W 20.0 dBi	19.0 dBm 0.079 W Pass m is 16dBm. Limit 16.0 dBm 0.040 W
Power Settin Output Power Antenna Gai eirp (dBm) ^{NN} Power level With 20dBi a 24 Power Settin Output Power Antenna Gai eirp (dBm) ^{NN} 24 Power Settin	ng (+20dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 2} lote 2 ls for the highest power antenna the maximum out l12 MHz Panel ng (+10dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 2} lote 2 l37 MHz Panel ng (+10dB pad) ^{Note 3}	-4.7 17.0 12.3 tested - pan tput power fo Chain 1 1.9 20.0 21.9 Chain 1	17.0 -5.8 17.0 11.2 nel antenna r point-to-poi Chain 2 14.0 1.8 20.0 21.8 Chain 2 19.0	-6.3 17.0 10.7 nt is 25dBm Chain 3 0.74 20.0 20.74 Chain 3	and for point Chain 4	-0.8 dBm 16.2 dBm -to-multipoint Total Across 6.3 dBm 26.3 dBm	0.001 W 17.0 dBi 0.042 W the maximu s All Chains 0.004 W 20.0 dBi 0.425 W s All Chains	19.0 dBm 0.079 W Pass m is 16dBm. Limit 16.0 dBm 0.040 W Pass Limit
Power Settin Output Power Antenna Gai eirp (dBm) ^{NN} Power level With 20dBi a 24 Power Settin Output Power Antenna Gai eirp (dBm) ^{NN} 24 Power Settin Output Power	ng (+20dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 2} lote 2 ls for the highest power antenna the maximum out l12 MHz Panel ng (+10dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 2} lote 2 l37 MHz Panel ng (+10dB pad) ^{Note 3} er (dBm) ^{Note 1}	-4.7 17.0 12.3 tested - pan tput power fo Chain 1 1.9 20.0 21.9 Chain 1 7.7	17.0 -5.8 17.0 11.2 hel antenna r point-to-poi Chain 2 14.0 1.8 20.0 21.8 Chain 2 19.0 7.4	-6.3 17.0 10.7 nt is 25dBm Chain 3 0.74 20.0 20.74 Chain 3 7.7	and for point Chain 4	-0.8 dBm 16.2 dBm -to-multipoint Total Across 6.3 dBm 26.3 dBm	0.001 W 17.0 dBi 0.042 W the maximu s All Chains 0.004 W 20.0 dBi 0.425 W s All Chains 0.017 W	19.0 dBm 0.079 W Pass m is 16dBm. Limit 16.0 dBm 0.040 W Pass Limit 16.0 dBm 0.040 W Pass
Power Settin Output Power Antenna Gai eirp (dBm) ^{NV} Power level With 20dBi a 24 Power Settin Output Power Antenna Gai eirp (dBm) ^{NV} 24 Power Settin Output Power Antenna Gai	ng (+20dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 2} lote 2 ls for the highest power antenna the maximum out l12 MHz Panel ng (+10dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 2} ote 2 l37 MHz Panel ng (+10dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 1} in (dBi) ^{Note 2}	-4.7 17.0 12.3 tested - pan put power fo Chain 1 1.9 20.0 21.9 Chain 1 7.7 20.0	17.0 -5.8 17.0 11.2 hel antenna r point-to-poi Chain 2 14.0 1.8 20.0 21.8 Chain 2 19.0 7.4 20.0	-6.3 17.0 10.7 nt is 25dBm Chain 3 0.74 20.0 20.74 Chain 3 7.7 20.0	and for point Chain 4	-0.8 dBm 16.2 dBm -to-multipoint Total Across 6.3 dBm 26.3 dBm Total Across 12.4 dBm	0.001 W 17.0 dBi 0.042 W the maximu s All Chains 0.004 W 20.0 dBi 0.425 W s All Chains 0.017 W 20.0 dBi	19.0 dBm 0.079 W Pass m is 16dBm. Limit 16.0 dBm 0.040 W Pass Limit
Power Settin Output Power Antenna Gai eirp (dBm) ^{NN} Power level With 20dBi a 24 Power Settin Output Power Antenna Gai eirp (dBm) ^{NN} 24 Power Settin Output Power	ng (+20dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 2} lote 2 ls for the highest power antenna the maximum out l12 MHz Panel ng (+10dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 2} ote 2 l37 MHz Panel ng (+10dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 1} in (dBi) ^{Note 2}	-4.7 17.0 12.3 tested - pan tput power fo Chain 1 1.9 20.0 21.9 Chain 1 7.7	17.0 -5.8 17.0 11.2 hel antenna r point-to-poi Chain 2 14.0 1.8 20.0 21.8 Chain 2 19.0 7.4	-6.3 17.0 10.7 nt is 25dBm Chain 3 0.74 20.0 20.74 Chain 3 7.7	and for point Chain 4	-0.8 dBm 16.2 dBm -to-multipoint Total Across 6.3 dBm 26.3 dBm	0.001 W 17.0 dBi 0.042 W the maximu s All Chains 0.004 W 20.0 dBi 0.425 W s All Chains 0.017 W	19.0 dBm 0.079 W Pass m is 16dBm. Limit 16.0 dBm 0.040 W Pass Limit 16.0 dBm 0.040 W Pass
Power Settin Output Power Antenna Gai eirp (dBm) ^{NN} Power level With 20dBi a 24 Power Settin Output Power Antenna Gai eirp (dBm) ^{NN} Output Power Antenna Gai eirp (dBm) ^{NN}	ng (+20dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 2} ls for the highest power antenna the maximum out 12 MHz Panel ng (+10dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 2} lote 2 l37 MHz Panel ng (+10dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 1} in (dBi) ^{Note 2}	-4.7 17.0 12.3 tested - pan put power fo Chain 1 1.9 20.0 21.9 Chain 1 7.7 20.0 27.7	17.0 -5.8 17.0 11.2 nel antenna r point-to-poi Chain 2 14.0 1.8 20.0 21.8 Chain 2 19.0 7.4 20.0 27.4	-6.3 17.0 10.7 nt is 25dBm Chain 3 0.74 20.0 20.74 Chain 3 7.7 20.0 27.7	and for point Chain 4 Chain 4	-0.8 dBm 16.2 dBm Total Across 6.3 dBm 26.3 dBm Total Across 12.4 dBm 32.4 dBm	0.001 W 17.0 dBi 0.042 W the maximu s All Chains 0.004 W 20.0 dBi 0.425 W s All Chains 0.017 W 20.0 dBi 1.727 W	19.0 dBm 0.079 W Pass m is 16dBm. Limit 16.0 dBm 0.040 W Pass Limit 16.0 dBm 0.040 W Pass Limit 16.0 dBm 0.040 W Pass
Power Settin Output Power Antenna Gai eirp (dBm) ^{Nr} Power level With 20dBi a 24 Power Settin Output Power Antenna Gai eirp (dBm) ^{Nr} 24 Power Settin Output Power Antenna Gai eirp (dBm) ^{Nr}	ng (+20dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 2} lote 2 ls for the highest power antenna the maximum out l12 MHz Panel ng (+10dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 2} lote 2 l37 MHz Panel ng (+10dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 1} in (dBi) ^{Note 2}	-4.7 17.0 12.3 tested - pan put power fo Chain 1 1.9 20.0 21.9 Chain 1 7.7 20.0	17.0 -5.8 17.0 11.2 nel antenna r point-to-poi Chain 2 14.0 1.8 20.0 21.8 Chain 2 19.0 7.4 20.0 27.4 Chain 2	-6.3 17.0 10.7 nt is 25dBm Chain 3 0.74 20.0 20.74 Chain 3 7.7 20.0	and for point Chain 4	-0.8 dBm 16.2 dBm Total Across 6.3 dBm 26.3 dBm Total Across 12.4 dBm 32.4 dBm	0.001 W 17.0 dBi 0.042 W the maximu s All Chains 0.004 W 20.0 dBi 0.425 W s All Chains 0.017 W 20.0 dBi	19.0 dBm 0.079 W Pass m is 16dBm. Limit 16.0 dBm 0.040 W Pass Limit 16.0 dBm 0.040 W Pass Limit 16.0 dBm 0.040 W Pass
Power Settin Output Power Antenna Gai eirp (dBm) ^N Power level With 20dBi a 24 Power Settin Output Power Antenna Gai eirp (dBm) ^N 24 Power Settin Output Power Antenna Gai eirp (dBm) ^N 24 Power Settin	ng (+20dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 2} lote 2 ls for the highest power antenna the maximum out l12 MHz Panel ng (+10dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 2} ote 2 l37 MHz Panel ng (+10dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 2} ote 2 lin (dBi) ^{Note 2} ote 2 lin (dBi) ^{Note 3}	-4.7 17.0 12.3 tested - pan tput power fo Chain 1 1.9 20.0 21.9 Chain 1 7.7 20.0 27.7 Chain 1	17.0 -5.8 17.0 11.2 hel antenna r point-to-poi Chain 2 14.0 1.8 20.0 21.8 Chain 2 19.0 7.4 20.0 27.4 20.0 27.4 Chain 2 14.0	-6.3 17.0 10.7 nt is 25dBm Chain 3 0.74 20.0 20.74 Chain 3 7.7 20.0 27.7 Chain 3	and for point Chain 4 Chain 4	-0.8 dBm 16.2 dBm Total Across 6.3 dBm 26.3 dBm Total Across 12.4 dBm 32.4 dBm	0.001 W 17.0 dBi 0.042 W the maximu s All Chains 0.004 W 20.0 dBi 0.425 W s All Chains 0.017 W 20.0 dBi 1.727 W s All Chains	19.0 dBm 0.079 W Pass m is 16dBm. Limit 16.0 dBm 0.040 W Pass Limit 16.0 dBm 0.040 W Pass Limit 16.0 dBm 0.040 W Pass Limit 16.0 dBm 0.040 W Limit 16.0 dBm 0.040 W
Power Settin Output Power Antenna Gai eirp (dBm) ^N Power level With 20dBi a 24 Power Settin Output Power Antenna Gai eirp (dBm) ^N 24 Power Settin Output Power Antenna Gai eirp (dBm) ^N 24 Power Settin Output Power Antenna Gai eirp (dBm) ^N	ng (+20dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 2} lote 2 ls for the highest power antenna the maximum out l12 MHz Panel ng (+10dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 1} in (dBi) ^{Note 2} lote 2 l37 MHz Panel ng (+10dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 2} lote 2 lote 2 lote 2 lote 2 lote 2 lote 2 lote 2 lote 1 lote 3 er (dBm) ^{Note 1}	-4.7 17.0 12.3 tested - pan put power fo Chain 1 1.9 20.0 21.9 Chain 1 7.7 20.0 27.7 Chain 1 2.0	17.0 -5.8 17.0 11.2 nel antenna r point-to-poi Chain 2 14.0 1.8 20.0 21.8 Chain 2 19.0 7.4 20.0 27.4 Chain 2 14.0 0.7	-6.3 17.0 10.7 nt is 25dBm Chain 3 0.74 20.0 20.74 Chain 3 7.7 20.0 27.7 Chain 3 0.4	and for point Chain 4 Chain 4	-0.8 dBm 16.2 dBm Total Across 6.3 dBm 26.3 dBm Total Across 12.4 dBm 32.4 dBm	0.001 W 17.0 dBi 0.042 W the maximu s All Chains 0.004 W 20.0 dBi 0.425 W s All Chains 0.017 W 20.0 dBi 1.727 W s All Chains 0.004 W	19.0 dBm 0.079 W Pass m is 16dBm. Limit 16.0 dBm 0.040 W Pass
Power Settin Output Power Antenna Gai eirp (dBm) ^N Power level With 20dBi a 24 Power Settin Output Power Antenna Gai eirp (dBm) ^N 24 Power Settin Output Power Antenna Gai eirp (dBm) ^N 24 Power Settin Output Power Antenna Gai eirp (dBm) ^N	ng (+20dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 2} lote 2 ls for the highest power antenna the maximum out h12 MHz Panel ng (+10dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 2} lote 2 l37 MHz Panel ng (+10dB pad) ^{Note 3} er (dBm) ^{Note 1} in (dBi) ^{Note 2} lote 2 lote 2 lote 2 lote 2 lote 2 lote 2 lote 3 lote 1 in (dBi) ^{Note 1} in (dBi) ^{Note 2}	-4.7 17.0 12.3 tested - pan tput power fo Chain 1 1.9 20.0 21.9 Chain 1 7.7 20.0 27.7 Chain 1	17.0 -5.8 17.0 11.2 hel antenna r point-to-poi Chain 2 14.0 1.8 20.0 21.8 Chain 2 19.0 7.4 20.0 27.4 20.0 27.4 Chain 2 14.0	-6.3 17.0 10.7 nt is 25dBm Chain 3 0.74 20.0 20.74 Chain 3 7.7 20.0 27.7 Chain 3	and for point Chain 4 Chain 4	-0.8 dBm 16.2 dBm Total Across 6.3 dBm 26.3 dBm Total Across 12.4 dBm 32.4 dBm	0.001 W 17.0 dBi 0.042 W the maximu s All Chains 0.004 W 20.0 dBi 0.425 W s All Chains 0.017 W 20.0 dBi 1.727 W s All Chains	19.0 dBm 0.079 W Pass m is 16dBm. Limit 16.0 dBm 0.040 W Pass Limit 16.0 dBm 0.040 W Pass Limit 16.0 dBm 0.040 W Pass Limit 16.0 dBm 0.040 W Limit 16.0 dBm 0.040 W





An ATAS company								
Client: Proxim Corporation						lob Number:	J75847	
	·						T75950	
Model: PROXMB82 802.11abg	PROXMB82 802.11abgn miniPCI module (3x3)						-	
Contact: Ivaylo Tankov						Ū		
Standard: FCC Part 15 Subpart C	(15 247) RS	\$ 210				Class:	N/A	
	(10.211), 100	5210				01000.		
Run #4: Output Power - 802.11n H	1110							
Transmitted signal on chain		No						
Power levels for the highest powe	r tested - sec	tor antenna						
Nith 17dBi antenna the maximum ou				and for point	t-to-multipoint	the maximu	m is 19dBm.	
2422 MHz Sector	Chain 1	Chain 2	Chain 3	(Chain 4)	Total Aaros	s All Chains	Limit	
Power Setting (+20dB pad) ^{Note 3}		15.0			TOTAL ACTOS		LITIIL	
Dutput Power (dBm) Note 1	-6.7	-6.7	-6.7		-1.9 dBm	0.001 W	19.0 dBm 0.079 W	
Antenna Gain (dBi) Note 2	17.0	17.0	17.0			17.0 dBi	Pass	
eirp (dBm) ^{Note 2}	10.3	10.3	10.3		15.1 dBm	0.032 W	F 033	
2437 MHz Sector	Chain 1	Chain 2	Chain 3	()KhainX	Total Acros	s All Chains	Limit	
Power Setting (+20dB pad) ^{Note 3}		19.0					_	
Output Power (dBm) Note 1	-2.4	-1.3	-2.2		2.8 dBm	0.002 W	19.0 dBm 0.079 W	
Antenna Gain (dBi) ^{Note 2}	17.0	17.0	17.0			17.0 dBi	Pass	
eirp (dBm) ^{Note 2}	14.6	15.7	14.8		19.8 dBm	0.096 W	1 466	
	- <u></u>			<u> </u>	9		1	
2452 MHz Sector	Chain 1	Chain 1 Chain 2 Chain 3		Total Across All Chains	Limit			
Power Setting (+20dB pad) ^{Note 3}		10.0						
Output Power (dBm) Note 1	-11.97	-12.3	-12.1		-7.3 dBm	0.000 W	19.0 dBm 0.079 W	
Antenna (Jain (OBI)	17.0	17.0	17.0			17.0 dBi	Pass	
eirp (dBm) Note 2	5.03	4.7	4.9		9.6 dBm	0.009 W		
Power levels for the highest powe	w to a to all man							
Power levels for the highest nowe	r tested - dar	iel antenna				the maximu		
• •	-		int in 25dDm	and for point	to multipoint		m in 16dDm	
Nith 20dBi antenna the maximum or	utput power fo	r point-to-poi	r	and for point	t-to-multipoint		m is 16dBm.	
With 20dBi antenna the maximum ou 2422 MHz Panel	-	r point-to-poi Chain 2	int is 25dBm Chain 3	and for point	1	s All Chains		
With 20dBi antenna the maximum ou 2422 MHz Panel Power Setting (+10dB pad) ^{Note 3}	utput power fo Chain 1	r point-to-poi Chain 2 11.5	Chain 3	and for point	Total Acros	s All Chains	Limit	
With 20dBi antenna the maximum ou 2422 MHz Panel Power Setting (+10dB pad) ^{Note 3} Output Power (dBm) ^{Note 1}	utput power fo Chain 1 -0.8	r point-to-poi Chain 2 11.5 -1.0	Chain 3 -0.4	and for point	Total Acros	s All Chains 0.003 W	Limit 16.0 dBm 0.040 W	
With 20dBi antenna the maximum ou 2422 MHz Panel Power Setting (+10dB pad) ^{Note 3} Output Power (dBm) ^{Note 1} Antenna Gain (dBi) ^{Note 2}	Chain 1 -0.8 20.0	r point-to-poi Chain 2 11.5 -1.0 20.0	Chain 3 -0.4 20.0	and for point	Total Acros 4.0 dBm	s All Chains 0.003 W 20.0 dBi	Limit	
With 20dBi antenna the maximum or	utput power fo Chain 1 -0.8	r point-to-poi Chain 2 11.5 -1.0	Chain 3 -0.4	and for point	Total Acros	s All Chains 0.003 W	Limit 16.0 dBm 0.040 W	
With 20dBi antenna the maximum ou 2422 MHz Panel Power Setting (+10dB pad) ^{Note 3} Output Power (dBm) ^{Note 1} Antenna Gain (dBi) ^{Note 2} eirp (dBm) ^{Note 2}	utput power fo Chain 1 -0.8 20.0 19.2	r point-to-poi Chain 2 11.5 -1.0 20.0 19	-0.4 20.0 19.6	and for point	Total Acros 4.0 dBm 24.0 dBm	s All Chains 0.003 W 20.0 dBi 0.254 W	Limit 16.0 dBm 0.040 W Pass	
With 20dBi antenna the maximum ou 2422 MHz Panel Power Setting (+10dB pad) ^{Note 3} Output Power (dBm) ^{Note 1} Antenna Gain (dBi) ^{Note 2} eirp (dBm) ^{Note 2} 2437 MHz Panel	Chain 1 -0.8 20.0	r point-to-poi Chain 2 11.5 -1.0 20.0 19 Chain 2	Chain 3 -0.4 20.0	and for point	Total Acros 4.0 dBm 24.0 dBm	s All Chains 0.003 W 20.0 dBi	Limit 16.0 dBm 0.040 W Pass	
With 20dBi antenna the maximum or 2422 MHz Panel Power Setting (+10dB pad) ^{Note 3} Dutput Power (dBm) ^{Note 1} Antenna Gain (dBi) ^{Note 2} eirp (dBm) ^{Note 2} 2437 MHz Panel Power Setting (+10dB pad) ^{Note 3}	utput power fo Chain 1 -0.8 20.0 19.2 Chain 1	r point-to-poi Chain 2 11.5 -1.0 20.0 19 Chain 2 19.0	Chain 3 -0.4 20.0 19.6 Chain 3	and for point Chain 4	Total Acros 4.0 dBm 24.0 dBm Total Acros	s All Chains 0.003 W 20.0 dBi 0.254 W s All Chains	Limit 16.0 dBm 0.040 W Pass Limit	
Vith 20dBi antenna the maximum ou 2422 MHz Panel Power Setting (+10dB pad) ^{Note 3} Dutput Power (dBm) ^{Note 1} Antenna Gain (dBi) ^{Note 2} pirp (dBm) ^{Note 2} 2437 MHz Panel Power Setting (+10dB pad) ^{Note 3} Dutput Power (dBm) ^{Note 1}	utput power fo Chain 1 -0.8 20.0 19.2 Chain 1 - 7.5	r point-to-poi Chain 2 11.5 -1.0 20.0 19 Chain 2 19.0 8.7	Chain 3 -0.4 20.0 19.6 Chain 3 7.9	and for point	Total Acros 4.0 dBm 24.0 dBm	s All Chains 0.003 W 20.0 dBi 0.254 W s All Chains 0.019 W	Limit 16.0 dBm 0.040 W Pass Limit 16.0 dBm 0.040 W	
With 20dBi antenna the maximum ou 2422 MHz Panel Power Setting (+10dB pad) ^{Note 3} Output Power (dBm) ^{Note 1} Antenna Gain (dBi) ^{Note 2} eirp (dBm) ^{Note 2} 2437 MHz Panel Power Setting (+10dB pad) ^{Note 3} Output Power (dBm) ^{Note 1} Antenna Gain (dBi) ^{Note 2}	utput power fo Chain 1 -0.8 20.0 19.2 Chain 1 -7.5 20.0	r point-to-poi Chain 2 11.5 -1.0 20.0 19 Chain 2 19.0 8.7 20.0	Chain 3 -0.4 20.0 19.6 Chain 3 7.9 20.0	and for point	Total Acros 4.0 dBm 24.0 dBm Total Acros 12.8 dBm	s All Chains 0.003 W 20.0 dBi 0.254 W s All Chains 0.019 W 20.0 dBi	Limit 16.0 dBm 0.040 W Pass Limit	
With 20dBi antenna the maximum ou 2422 MHz Panel Power Setting (+10dB pad) ^{Note 3} Output Power (dBm) ^{Note 1} Antenna Gain (dBi) ^{Note 2} eirp (dBm) ^{Note 2} 2437 MHz Panel Power Setting (+10dB pad) ^{Note 3} Output Power (dBm) ^{Note 1} Antenna Gain (dBi) ^{Note 2}	utput power fo Chain 1 -0.8 20.0 19.2 Chain 1 - 7.5	r point-to-poi Chain 2 11.5 -1.0 20.0 19 Chain 2 19.0 8.7	Chain 3 -0.4 20.0 19.6 Chain 3 7.9	and for point	Total Acros 4.0 dBm 24.0 dBm Total Acros	s All Chains 0.003 W 20.0 dBi 0.254 W s All Chains 0.019 W	Limit 16.0 dBm 0.040 W Pass Limit 16.0 dBm 0.040 W	
With 20dBi antenna the maximum ou 2422 MHz Panel Power Setting (+10dB pad) ^{Note 3} Output Power (dBm) ^{Note 1} Antenna Gain (dBi) ^{Note 2} eirp (dBm) ^{Note 2} 2437 MHz Panel Power Setting (+10dB pad) ^{Note 3} Output Power (dBm) ^{Note 1} Antenna Gain (dBi) ^{Note 2}	utput power fo Chain 1 -0.8 20.0 19.2 Chain 1 -7.5 20.0	r point-to-poi Chain 2 11.5 -1.0 20.0 19 Chain 2 19.0 8.7 20.0	Chain 3 -0.4 20.0 19.6 Chain 3 7.9 20.0	and for point Chain &	Total Acros 4.0 dBm 24.0 dBm Total Acros 12.8 dBm 32.8 dBm	s All Chains 0.003 W 20.0 dBi 0.254 W s All Chains 0.019 W 20.0 dBi 1.920 W	Limit 16.0 dBm 0.040 W Pass Limit 16.0 dBm 0.040 W Pass	
Vith 20dBi antenna the maximum ou 2422 MHz Panel Power Setting (+10dB pad) ^{Note 3} Dutput Power (dBm) ^{Note 1} Antenna Gain (dBi) ^{Note 2} 2437 MHz Panel Power Setting (+10dB pad) ^{Note 3} Dutput Power (dBm) ^{Note 1} Antenna Gain (dBi) ^{Note 2} eirp (dBm) ^{Note 2} 2452 MHz Panel	utput power fo Chain 1 -0.8 20.0 19.2 Chain 1 7.5 20.0 27.5	r point-to-poi Chain 2 11.5 -1.0 20.0 19 Chain 2 19.0 8.7 20.0 28.7	Chain 3 -0.4 20.0 19.6 Chain 3 7.9 20.0 27.9		Total Acros 4.0 dBm 24.0 dBm Total Acros 12.8 dBm 32.8 dBm	s All Chains 0.003 W 20.0 dBi 0.254 W s All Chains 0.019 W 20.0 dBi	Limit 16.0 dBm 0.040 W Pass Limit 16.0 dBm 0.040 W Pass	
With 20dBi antenna the maximum ou 2422 MHz Panel Power Setting (+10dB pad) ^{Note 3} Output Power (dBm) ^{Note 1} Antenna Gain (dBi) ^{Note 2} eirp (dBm) ^{Note 2} 2437 MHz Panel Power Setting (+10dB pad) ^{Note 3} Output Power (dBm) ^{Note 1} Antenna Gain (dBi) ^{Note 2} eirp (dBm) ^{Note 2} 2452 MHz Panel Power Setting (+10dB pad) ^{Note 3}	utput power fo Chain 1 -0.8 20.0 19.2 Chain 1 7.5 20.0 27.5 Chain 1	r point-to-poi Chain 2 11.5 -1.0 20.0 19 Chain 2 19.0 8.7 20.0 28.7 Chain 2 12.0	Chain 3 -0.4 20.0 19.6 Chain 3 7.9 20.0 27.9 Chain 3		Total Acros 4.0 dBm 24.0 dBm Total Acros 12.8 dBm 32.8 dBm Total Acros	s All Chains 0.003 W 20.0 dBi 0.254 W s All Chains 0.019 W 20.0 dBi 1.920 W s All Chains	Limit 16.0 dBm 0.040 W Pass Limit 16.0 dBm 0.040 W Pass Limit	
With 20dBi antenna the maximum ou 2422 MHz Panel Power Setting (+10dB pad) ^{Note 3} Output Power (dBm) ^{Note 1} Antenna Gain (dBi) ^{Note 2} eirp (dBm) ^{Note 2} 2437 MHz Panel Power Setting (+10dB pad) ^{Note 3} Output Power (dBm) ^{Note 1} Antenna Gain (dBi) ^{Note 2} 2452 MHz Panel Power Setting (+10dB pad) ^{Note 3} Output Power (dBm) ^{Note 1}	utput power fo Chain 1 -0.8 20.0 19.2 Chain 1 7.5 20.0 27.5 Chain 1 - - - - - - - - - - - - - - - - - - -	r point-to-poi Chain 2 11.5 -1.0 20.0 19 Chain 2 19.0 8.7 20.0 28.7 Chain 2 12.0 -0.3	Chain 3 -0.4 20.0 19.6 Chain 3 7.9 20.0 27.9 Chain 3 -0.03		Total Acros 4.0 dBm 24.0 dBm Total Acros 12.8 dBm 32.8 dBm	s All Chains 0.003 W 20.0 dBi 0.254 W s All Chains 0.019 W 20.0 dBi 1.920 W s All Chains 0.003 W	Limit 16.0 dBm 0.040 W Pass Limit 16.0 dBm 0.040 W Pass Limit 16.0 dBm 0.040 W	
With 20dBi antenna the maximum ou 2422 MHz Panel Power Setting (+10dB pad) ^{Note 3} Output Power (dBm) ^{Note 1} Antenna Gain (dBi) ^{Note 2} eirp (dBm) ^{Note 2} 2437 MHz Panel Power Setting (+10dB pad) ^{Note 3} Output Power (dBm) ^{Note 1} Antenna Gain (dBi) ^{Note 2} eirp (dBm) ^{Note 2} 2452 MHz Panel Power Setting (+10dB pad) ^{Note 3}	utput power fo Chain 1 -0.8 20.0 19.2 Chain 1 7.5 20.0 27.5 Chain 1	r point-to-poi Chain 2 11.5 -1.0 20.0 19 Chain 2 19.0 8.7 20.0 28.7 Chain 2 12.0	Chain 3 -0.4 20.0 19.6 Chain 3 7.9 20.0 27.9 Chain 3		Total Acros 4.0 dBm 24.0 dBm Total Acros 12.8 dBm 32.8 dBm Total Acros	s All Chains 0.003 W 20.0 dBi 0.254 W s All Chains 0.019 W 20.0 dBi 1.920 W s All Chains	Limit 16.0 dBm 0.040 W Pass Limit 16.0 dBm 0.040 W Pass Limit	





nodule (3x3) ISS 210 FCC 15.247		Job Number: T-Log Number: Account Manager:	T75950
ISS 210		,	
ISS 210		Account Manager:	-
		Class:	N/A
	7 (DTS) Radia Sector Anten		IS
5			
	form final qualification te	esting of the EUT with r	espect to the
	Config. Used: 1		
	Config Change: -		
	Host Unit Voltage 12	20V/60Hz	
est session is to pe			with respect to the
	• •	<i>'</i>	
Rel. Humidity:	15-65 %		
l'emperature:	15-25 °C		
g testing			
nts of the standard			
	bve. h the host system of ent antenna was lo est session is to per bve. hat the EUT was e ent antenna was lo Rel. Humidity: Temperature: hg testing	Config. Used: 1 Config Change: - Host Unit Voltage 12 h the host system covers removed to expose ent antenna was located 3 meters from the est session is to perform engineering evaluations. hat the EUT was exposed (i.e. outside of a ent antenna was located 3 meters from the Rel. Humidity: 15-65 % Temperature: 15-25 °C	Config. Used: 1 Config Change: - Host Unit Voltage 120V/60Hz the host system covers removed to exposure the module. ent antenna was located 3 meters from the EUT. est session is to perform engineering evaluation testing of the EUT ove. that the EUT was exposed (i.e. outside of a host PC). ent antenna was located 3 meters from the EUT. Rel. Humidity: 15-65 % Temperature: 15-25 °C

EMC Test Data

	An <u>AZAS</u> company		
Client:	Proxim Corporation	Job Number:	J75847
Madali	PROXMB82 802.11abgn miniPCI module (3x3)	T-Log Number:	T75950
wouer.	FROXIMBOZ 602. I Tabyri Hilliffor Hiddule (5x5)	Account Manager:	-
Contact:	Ivaylo Tankov		
Standard:	FCC Part 15 Subpart C (15.247), RSS 210	Class:	N/A

Summary of Results

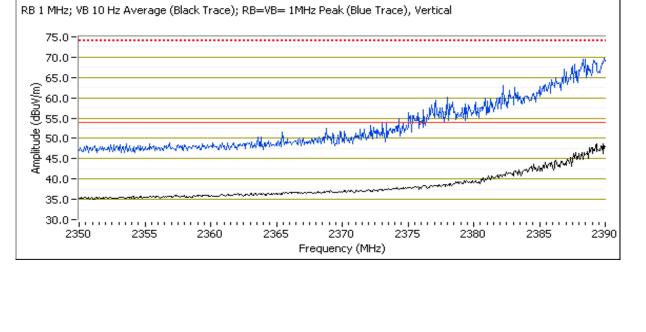
All measurements made with an additional 20dB attenuator between rf port and antenna.

An measure	mento mau			D attenuato	i between n port and a		
Run #	Mode	Channel	Attenuator (dB)	Power Setting	Test Performed	Limit	Result / Margin
Run # 1	802.11n HT40	#3 2422MHz	20.0	15.0	Restricted Band Edge at 2400 MHz	15.209	72.0dBµV/m @ 2385.8MHz (-2.0dB)
Rull#1	Chain A+B+C	#9 2452MHz	20.0	10.0	Restricted Band Edge at 2483.5 MHz	15.209	72.2dBµV/m @ 2483.7MHz (-1.8dB)
Run # 2	802.11n HT20	#1 2412MHz	20.0	17.0	Restricted Band Edge at 2400 MHz	15.209	52.0dBµV/m @ 2389.7MHz (-2.0dB)
Rull # 2	Chain A+B+C	#11 2462MHz	20.0	17.0	Restricted Band Edge at 2483.5 MHz	15.209	51.9dBµV/m @ 2483.7MHz (-2.1dB)
Run # 3	802.11g	#1 2412MHz	20.0	17.5	Restricted Band Edge at 2400 MHz	15.209	52.6dBµV/m @ 2390.0MHz (-1.4dB)
Kull # 3	Chain A	#11 2462MHz	20.0	17.5	Restricted Band Edge at 2483.5 MHz	15.209	53.1dBµV/m @ 2483.5MHz (-0.9dB)
Run # 4	802.11b	#1 2412MHz	20.0	18.0	Restricted Band Edge at 2400 MHz	15.209	53.4dBµV/m @ 2386.5MHz (-0.6dB)
Kull#4	Chain A	#11 2462MHz	20.0	18.5	Restricted Band Edge at 2483.5 MHz	15.209	51.7dBµV/m @ 2488.0MHz (-2.3dB)

Elliott EMC Test Data Client: Proxim Corporation Job Number: J75847 T-Log Number: T75950 Model: PROXMB82 802.11abgn miniPCI module (3x3) Account Manager: Contact: Ivaylo Tankov Standard: FCC Part 15 Subpart C (15.247), RSS 210 Class: N/A Run # 1, Band Edge Field Strength - 802.11n HT40 Date of Test: 8/3/2009 Test Location: FT Chamber #5 Test Engineer: Mehran Birgani Config Change: None Run # 1a, EUT on Channel #3 (2422MHz) - 802.11n HT40 Power Settings Chain Target (dBm) Attenuator (dB) Software Setting 20.0 15.0 A+B+C Fundamental Signal Field Strength 15.209 / 15.247 Frequency Level Pol Detector Azimuth Height Comments V/H MHz dBµV/m Margin Pk/QP/Avg degrees meters Limit 2422.330 89.4 V AVG 359 1.4 --2432.730 99.7 V ΡK 359 1.4 _ _ 2422.270 AVG 1.0 71.6 Н --54 2431.330 81.2 Н PK 54 1.0 --2410.270 93.5 V _ --359 1.4 RB 100 kHz; VB: 100 kHz 2390 MHz Band Edge Signal Field Strength Frequency Level Pol 15.209 / 15.247 Detector Azimuth Comments Height Pk/QP/Avg MHz dBµV/m V/H Limit Margin degrees meters 2389.870 47.8 V 54.0 -6.2 AVG 359 1.4 2385.800 72.0 ٧ 74.0 -2.0 ΡK 359 1.4 RB 1 MHz; VB 10 Hz Average (Black Trace); RB=VB= 1MHz Peak (Blue Trace), Vertical 80.0 75.0 70.0 (#______65.0 #______65.0 #______60.0 And have the house the half of a production of the second of the for the half of the second of the half of the half of the second of the half of the half of the second of the half of the hal Amplitude 55.0 withtun 50.0 45.0 marthat 40.0 35.0-............... 2350 2355 2360 2365 2370 2375 2380 2385 2390 Frequency (MHz)

Elliott EMC Test Data Client: Proxim Corporation Job Number: J75847 T-Log Number: T75950 Model: PROXMB82 802.11abgn miniPCI module (3x3) Account Manager: Contact: Ivaylo Tankov Standard: FCC Part 15 Subpart C (15.247), RSS 210 Class: N/A Run # 1b, EUT on Channel #9 (2452MHz) - 802.11n HT40 Power Settings Chain Target (dBm) Attenuator (dB) Software Setting 20.0 10.0 A+B+C Fundamental Signal Field Strength 15.209 / 15.247 Frequency Level Pol Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters 2447.670 V AVG 350 1.2 85.1 --V ΡK 2457.800 96.8 350 1.2 --2447.930 67.2 Η AVG 216 _ 1.1 -216 2449.070 78.1 Н ΡK 1.1 --2447.270 86.2 V 350 1.2 RB 100 kHz; VB: 100 kHz _ 2483.5 MHz Band Edge Signal Field Strength 15.209 / 15.247 Frequency Level Pol Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters 2483.500 50.4 V 54.0 -3.6 AVG 350 1.2 2483.720 72.2 v 74.0 -1.8 ΡK 350 1.2 RB 1 MHz; VB 10 Hz Average (Black Trace); RB=VB= 1MHz Peak (Blue Trace), Vertical 80.0 75.0 70.0 Amplitude (dBuV/m) 65.0 60.0 55.0 50.0 45.0 40.0 35.0 -¦, , , , - - - - -2492.0 2483.5 2486.0 2488.0 2490.0 2494.0 2496.0 2498.0 2500.0 Frequency (MHz)

Elliott EMC Test Data Client: Proxim Corporation Job Number: J75847 T-Log Number: T75950 Model: PROXMB82 802.11abgn miniPCI module (3x3) Account Manager: Contact: Ivaylo Tankov Standard: FCC Part 15 Subpart C (15.247), RSS 210 Class: N/A Run # 2, Band Edge Field Strength - 802.11n HT20 Date of Test: 8/4/2009 Test Location: FT Chamber #4 Test Engineer: Mehran Birgani Config Change: None Run # 2a, EUT on Channel #1 (2412MHz) - 802.11n HT20 Power Settings Chain Target (dBm) Attenuator (dB) Software Setting 20.0 17.0 A+B+C Fundamental Signal Field Strength 15.209 / 15.247 Frequency Level Pol Detector Azimuth Height Comments V/H MHz dBµV/m Margin Pk/QP/Ava degrees meters Limit 2413.200 95.6 V AVG 1.4 --1 2416.970 105.3 V ΡK 1 1.4 _ _ 2409.600 79.4 AVG 311 1.0 Н --2409.130 88.8 Н PK 311 1.0 --2416.200 98.2 V _ --1 1.4 RB 100 kHz; VB: 100 kHz 2390 MHz Band Edge Signal Field Strength Frequency Level Pol 15.209 / 15.247 Detector Azimuth Comments Height MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters ۷ 2389.670 52.0 54.0 -2.0 AVG 1.4 1 2389.730 67.2 V 74.0 -6.8 ΡK 1.4 1



Elliott EMC Test Data Client: Proxim Corporation Job Number: J75847 T-Log Number: T75950 Model: PROXMB82 802.11abgn miniPCI module (3x3) Account Manager: Contact: Ivaylo Tankov Standard: FCC Part 15 Subpart C (15.247), RSS 210 Class: N/A Run # 2b, EUT on Channel #11 (2462MHz) - 802.11n HT20 Power Settings Chain Target (dBm) Attenuator (dB) Software Setting 20.0 A+B+C 17.0 Fundamental Signal Field Strength 15.209 / 15.247 Frequency Level Pol Detector Azimuth Height Comments MHz dBµV/m V/H Margin Pk/QP/Avg meters Limit degrees 2461.130 94.4 V AVG 1.4 356 --2463.230 104.8 V PK 356 1.4 _ -2464.100 82.6 Η AVG 22 1.0 _ -22 2462.200 92.4 Н ΡK 1.0 --2461.530 96.9 ٧ 356 1.4 RB 100 kHz; VB: 100 kHz _ _ _ 2483.5 MHz Band Edge Signal Field Strength 15.209 / 15.247 Frequency Level Pol Detector Azimuth Height Comments MHz dBµV/m V/H Pk/QP/Avg Limit Margin degrees meters 2483.660 51.9 ۷ 54.0 -2.1 AVG 356 1.4 2485.230 69.5 V 74.0 -4.5 ΡK 356 1.4 RB 1 MHz; VB 10 Hz Average (Black Trace); RB=VB= 1MHz Peak (Blue Trace), Vertical 80.0 75.0-70.0 M. Murrill Whittude (dBuV/m) 65.0 when the week of the the stand of 45.0 40.0 35.0 -[|], , , 2490.0 2483.5 2486.0 2488.0 2492.0 2494.0 2496.0 2498.0 2500.0 Frequency (MHz)

Cliont	An AZ								1
Client.	Proxim Corp	oration						Job Number:	
Model:	PROXMB82	802.11abon	miniPCI mo	dule (3x3)				-Log Number:	
							Acco	ount Manager:	-
	Ivaylo Tanko								
Standard:	FCC Part 15	Subpart C (15.247), RSS	5 210				Class:	N/A
un # 3, Ba	nd Edge Fie	ld Strength	- 802.11q						
Γ	Date of Test:	8/4/2009	-			st Location:		er #4	
Te	st Engineer:	Mehran Birg	ani		Con	fig Change:	None		
un #3a F	UT on Chani	nel #1 (2412	(MHz) - 802 ·	11a					
un <i>n</i> ou, L	Chain				Settings			7	
		Target	(dBm)		ator (dB)		e Setting		
	А			2	0.0	17	7.5		
undamont	al Signal Fie	d Stronath							
-requency	Level	Pol		/ 15.247	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters		
2410.500	96.7	V	-	-	AVG	0	1.3		
2405.230	105.6	V	-	-	PK	0	1.3		
2409.700 2409.500	80.6 90.7	H H	-	-	AVG PK	309 309	1.0 1.0	+	
2409.500	90.7 95.8	п V	-	-	PN -	<u> </u>	1.0	RB 100 kHz	; VB: 100 kHz
2403.070	55.0	V	_			0	1.0		, VD. 100 KHZ
390 MHz E	and Edge Si	ignal Field S	Strength						
requency	Level	Pol	15.209	/ 15.247	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters		
2390.000	52.6	V V	54.0	-1.4 -7.4	AVG PK	0	1.3 1.3		
2389.530	66.6	V	74.0	-1.4	PN	U	1.3		
		Hz Average			1MHz Peak (I				
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Amplitude (dBuV/m)	70.0 - 65.0 - 55.0 - 50.0 - 45.0 - 40.0 -	withthe red of y					upper vitala		Introduced the
Amplitude (dBuV/m)	70.0 - 65.0 - 60.0 - 55.0 - 50.0 - 45.0 -	verskiller red of t		1/	vndwaddi	hat a the sector of the	un and a second s	with a production of the second se	Introduced the

Elliott EMC Test Data Client: Proxim Corporation Job Number: J75847 T-Log Number: T75950 Model: PROXMB82 802.11abgn miniPCI module (3x3) Account Manager: Contact: Ivaylo Tankov Standard: FCC Part 15 Subpart C (15.247), RSS 210 Class: N/A Run # 3b, EUT on Channel #11 (2462MHz) - 802.11g Power Settings Chain Target (dBm) Attenuator (dB) Software Setting А 20.0 17.5 Fundamental Signal Field Strength 15.209 / 15.247 Frequency Level Pol Detector Azimuth Height Comments MHz dBµV/m V/H Margin Pk/QP/Avg Limit degrees meters 2462.200 V AVG 97.9 354 1.3 -107.0 V 2462.470 PK 354 1.3 _ -2462.170 83.2 Η AVG 27 1.0 _ -27 2462.430 91.4 Н ΡK 1.0 --2460.900 97.9 ٧ 354 1.3 RB 100 kHz; VB: 100 kHz _ 2483.5 MHz Band Edge Signal Field Strength 15.209 / 15.247 Frequency Level Pol Detector Azimuth Height Comments MHz dBµV/m V/H Pk/QP/Avg Limit Margin degrees meters 2483.500 53.1 ۷ 54.0 -0.9 AVG 354 1.3 2483.830 70.1 V 74.0 -3.9 ΡK 354 1.3 RB 1 MHz; VB 10 Hz Average (Black Trace); RB=VB= 1MHz Peak (Blue Trace), Vertical 75.0 _____ a mill of an and the second and the second of the second o (m) 4000 40 www.white he are when the address of the second 40.0 35.0 2483.5 2486.0 2488.0 2490.0 2492.0 2494.0 2496.0 2498.0 2500.d Frequency (MHz)

Client:	Proxim Corpo	oration					Job Number:	J75847	
Model		802 11abaa		dula (3v3)			T	-Log Number:	T75950
wouel.	PROXMB82	ooz. i iabyn		uul e (3X3)			Acco	ount Manager:	-
Contact:	Ivaylo Tanko	v							
Standard:	FCC Part 15	Subpart C (15.247), RSS	S 210				Class:	N/A
	and Edge Fiel		- 802.11b						
	Date of Test:					st Location:		er #4	
Ie	est Engineer:	Mehran Birg	jani		Con	fig Change:	None		
ın # 1a F	UT on Chanr	#1 (2 <i>4</i> 12	MH ₇) - 802 [·]	116					
ii # +α, 					Settings			7	
	Chain	Target	: (dBm)		ator (dB)	Software	e Setting		
	A			2	0.0	18	3.0		
	tal Signal Fie	Id Strength Pol		/ 15.247	Detector	Azimuth	Unight	Comments	
requency MHz	Level dBµV/m	V/H	Limit	Margin	Detector Pk/QP/Avg	Azimutn degrees	Height meters	Comments	
2415.300			-	-	AVG	344	1.2	+	
408.100	5.300 101.9 V		-	-	PK	344	1.2		
410.270	84.7	H	-	-	AVG	21	1.0		
2411.200	87.8	Н	-	-	PK	21	1.0		
408.530	99.5	V	-	-	-	344	1.2	RB 100 kHz	; VB: 100 kHz
equency MHz	dBµV/m	Pol V/H	Limit	/ 15.247 Margin	Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments	
386.530 386.330	53.4	V V	54.0 74.0	-0.6	AVG	344	1.2		
200.220	58.8	V	74.0	-15.2	PK	344	1.2		
	70.0 - 65.0 - 60.0 - 55.0 -					Manakart	how the second	man	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
litude	50.0- 45.0-		and the second	Lupphan Manua	hydronidersdante				1.4.111.

Elliott EMC Test Data Client: Proxim Corporation Job Number: J75847 T-Log Number: T75950 Model: PROXMB82 802.11abgn miniPCI module (3x3) Account Manager: Contact: Ivaylo Tankov Standard: FCC Part 15 Subpart C (15.247), RSS 210 Class: N/A Run # 4b, EUT on Channel #11 (2462MHz) - 802.11b Power Settings Chain Target (dBm) Attenuator (dB) Software Setting А 20.0 18.5 Fundamental Signal Field Strength 15.209 / 15.247 Frequency Level Pol Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters 2460.870 101.0 V AVG 360 1.2 --104.4 ٧ 2461.230 PK 360 1.2 --2461.400 89.0 Η AVG 21 1.0 _ _ 92.4 ΡK 21 2461.230 Н 1.0 --2461.200 99.4 V 360 1.2 RB 100 kHz; VB: 100 kHz _ _ 2483.5 MHz Band Edge Signal Field Strength 15.209 / 15.247 Frequency Level Pol Detector Azimuth Height Comments V/H MHz dBµV/m Limit Margin Pk/QP/Avg degrees meters 2487.980 51.7 ۷ 54.0 -2.3 AVG 360 1.2 2483.860 56.1 V 74.0 -17.9 ΡK 360 1.2 RB 1 MHz; VB 10 Hz Average (Black Trace); RB=VB= 1MHz Peak (Blue Trace), Vertical 75.0 -70.0 65.0 Amplitude (dBuV/m) 60.0 55.0 50.0 Manhadow wardward hard with 45.0 40.0 35.0 6 30.0-2483.5 2488.0 2490.0 2492.0 2494.0 2498.0 2486.0 2496.0 2500.0 Frequency (MHz)

C	Elliott			EMO	C Test Da
Client:	Proxim Corporation			Job Number:	
Model:	PROXMB82 802.11abgn miniPC	l module (3x3)		T-Log Number: Account Manager:	
Contact:	Ivaylo Tankov			Account Manager.	-
	FCC Part 15 Subpart C (15.247)	RSS 210		Class:	N/A
			7 (DTS) Radi Panel Ante	ated Emission nna	าร
Test Spe	cific Details Objective: The objective of this specification listed a		rform final qualification	testing of the EUT with r	espect to the
	Test Date: Refer to each run est Engineer: Refer to each run est Location: Refer to each run		Config. Used: Config Change: Host Unit Voltage	None	
	ed emissions testing the measure cific Details Objective: The objective of this specification listed a	test session is to pe		he EUT. luation testing of the EUT	with respect to the
	Fest Configuration ws installed into a test fixture such ed emissions testing the measure			-	
For radiat	Conditions:	Rel. Humidity: Temperature:	15-65 % 15-25 °C		
For radiat Ambient Modificat	Conditions: ions Made During Testing cations were made to the EUT du	Temperature:			
For radiat Ambient Modificat No modifi Deviation	ions Made During Testing	Temperature:	15-25 °C		
For radiat Ambient Modificat No modifi Deviation	ions Made During Testing cations were made to the EUT du as From The Standard	Temperature:	15-25 °C		

EMC Test Data

	An (ATLE) company		
Client:	Proxim Corporation	Job Number:	J75847
Model	PROXMB82 802.11abgn miniPCI module (3x3)	T-Log Number:	T75950
wouer.	FROXIMBOZ 602. I Tabyri Hilliffor Hiddule (5x5)	Account Manager:	-
Contact:	Ivaylo Tankov		
Standard:	FCC Part 15 Subpart C (15.247), RSS 210	Class:	N/A

Summary of Results

All measurements made with an additional 10dB attenuator between rf port and antenna.

					i between n port and a		
Run #	Mode	Channel	Attenuator (dB)	Power Setting	Test Performed	Limit	Result / Margin
Run # 1	802.11n HT40	#3 2422MHz	10.0	11.5	Restricted Band Edge at 2400 MHz	15.209	52.4dBµV/m @ 2389.6MHz (-1.6dB)
Rull#1	Chain A+B+C	#9 2452MHz	10.0	12.0	Restricted Band Edge at 2483.5 MHz	15.209	51.9dBµV/m @ 2483.5MHz (-2.1dB)
Run # 2	802.11n HT20	#1 2412MHz	10.0	14.0	Restricted Band Edge at 2400 MHz	15.209	53.1dBµV/m @ 2390.0MHz (-0.9dB)
Rull # 2	Chain A+B+C	#11 2462MHz	10.0	14.0	Restricted Band Edge at 2483.5 MHz	15.209	52.2dBµV/m @ 2483.5MHz (-1.8dB)
Run # 3	802.11g	#1 2412MHz	10.0	14.5	Restricted Band Edge at 2400 MHz	15.209	52.9dBµV/m @ 2390.0MHz (-1.1dB)
Rull # 3	Chain A	#11 2462MHz	10.0	14.5	Restricted Band Edge at 2483.5 MHz	15.209	52.6dBµV/m @ 2483.5MHz (-1.4dB)
Run # 4	802.11b	#1 2412MHz	10.0	15.5	Restricted Band Edge at 2400 MHz	15.209	52.2dBµV/m @ 2385.5MHz (-1.8dB)
rtuil # 4	Chain A	#11 2462MHz	10.0	17.5	Restricted Band Edge at 2483.5 MHz	15.209	49.6dBµV/m @ 2488.5MHz (-4.4dB)

Client:	Proxim Corp	oration					Job Number:		
Model.		802 11abon	miniPCI mo	dule (3x3)				Log Number:	
Woder.		. 002.110091					Acco	unt Manager:	-
Contact:	Ivaylo Tank	vo							
Standard:	FCC Part 1	5 Subpart C (15.247), RSS	S 210				Class:	N/A
I	Date of Test:		- 802.11n H T ani	F40		est Location: fig Change:		er #3	
Run <mark>#</mark> 1a, E	UT on Char	nel #3 (2422	MHz) - 802.1					-	
	Chain				Settings	• "	0		
		l arget	(dBm)		ator (dB)		e Setting	-	
	A+B+C			1	0.0	11	.5		
undamon	al Signal Fi	eld Strength							
Frequency	Level	Pol	15.209	15.247	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters		
2422.270	97.0	V	-	-	AVG	Ũ	1.2		
2415.200	107.2	V	-	-	PK	0	1.2		
2422.200	78.4	Н	-	-	AVG	294	1.0		
2420.000	87.8	Н	-	-	PK	294	1.0		
2437.470	99.0	V	-	-	-	0	1.2	RB 100 kHz	; VB: 100 kHz
2 390 MHz E Frequency MHz	Level	ignal Field S Pol V/H	15.209	15.247	Detector	Azimuth	Height	Comments	
2389.600	dBµV/m 52.4	V/H V	Limit 54.0	Margin -1.6	Pk/QP/Avg AVG	degrees 0	meters 1.2		
2389.870	37.6	H	54.0	-16.4	AVG	294	1.2		
2386.070	52.2	H	74.0	-21.8	PK	294	1.0		
2389.200	70.6	V	74.0	-3.4	PK	0	1.0		
			•	•••		,			
	80.0-	Hz Average	(Black Trace), RB=VB=	1MHz Peak (Blue Trace),	Vertical		
	75.0-								La Mana
<u> </u>	70.0-							IN IN IN	WM MIN **
Amplitude (dBuV/m)	65.0-						. Mak	MANNI T	1. <u>a. d. 11</u>
9	60.0-				Whentermander	de march	HAMPHAN PL	T dia 1	
ude	55.0 - <mark></mark>	with the stand	-had affered	MAYNER	y in which which it is a second s	-Weight and a			
plit	50.0-								
	45.0-						and the second second		
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EMC Tost Data

Chain Target (dBm) Attenuator (dB) Software Setting A+B+C 10.0 12.0 undamental Signal Field Strength Terquency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters 2452.330 102.1 V - - AVG 0 1.2 2434.470 108.7 V - - PK 0 1.2 2452.330 104.5 V - - O 1.2 2452.330 104.5 2452.330 104.5 V - - 0 1.2 RB 100 kHz; VB: 100 kHz 2483.50 51.9 V 54.0 -2.1 AVG 0 1.2 2483.500 51.9 V 54.0 -2.1 AVG 0 1.2 2483.530 37.6 H 54.0 -2.1 AVG 293	1 1		A company						Job Number	175017
Model: PROXMB82 802.11abgn miniPCI module (3x3) Account Manager: - Contact: Ivaylo Tankov Standard: FCC Part 15 Subpart C (15.247), RSS 210 Class: N/A un # 1b, EUT on Channel #9 (2452MHz) - 802.11n HT40 Chain Target (dBm) Attenuator (dB) Software Setting A+B+C 10.0 12.0 undamental Signal Field Strength requency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin PK/QP/Avg degrees meters 2452.270 82.3 H - - PK 0 1.2 2441.800 87.8 H - - PK 293 1.0 2452.270 Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz Badd Edge Signal Field Strengt	Client:	Proxim Corp	oration							
Contact: Ivaylo Tankov Standard: FCC Part 15 Subpart C (15.247), RSS 210 Class: N/A Run # 1b, EUT on Channel #9 (2452MHz) - 802.11n HT40 Power Settings Class: N/A Chain Target (dBm) Attenuator (dB) Software Setting A+B+C 10.0 12.0 Cundamental Signal Field Strength Frequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin PK/QP/Avg degrees meters 2452.330 102.1 V - - AVG 0 1.2 2432.470 108.7 V - - PK 0 1.2 2425.230 104.5 V - - 0 1.2 243.24.270 243.5 MHz Band Edge Signal Field Strength - - 0 1.2 248.230 76.4 Pol 15.209 / 15.247 Detector Azimuth Height Comments <td>Model:</td> <td>PROXMB82</td> <td>802.11abgn</td> <td>miniPCI mo</td> <td>dule (3x3)</td> <td></td> <td></td> <td></td> <td>•</td> <td></td>	Model:	PROXMB82	802.11abgn	miniPCI mo	dule (3x3)				•	
Standard: FCC Part 15 Subpart C (15.247), RSS 210 Class: N/A Power Settings Power Settings Chain Target (dBm) Attenuator (dB) Software Setting Attenuator (dB) Software Setting Attenuator (dB) Software Setting Attenuator (dB) Software Setting Mind Strength Tequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MH2 dBµV/m VIH Limit Margin PK/QP/Avg degrees meters 2452.270 82.3 H - - PK 0 1.2 2452.270 82.3 H - - 0 1.2 2452.270 82.3 H - - 0 1.2 2452.270 82.3 1.0 2452.270 82.3 1.0 2483.500 51.9	<u> </u>							ACCO	unt Manager:	-
Run # 1b, EUT on Channel #9 (2452MHz) - 802.11n HT40 Chain Target (dBm) Attenuator (dB) Software Setting A+B+C 10.0 12.0 Frequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters 2452.330 102.1 V - - AVG 0 1.2 243.470 108.7 V - - PK 0 1.2 2423.230 102.1 V - - PK 0 1.2 243.470 108.7 V - - PK 0 1.2 2425.270 82.3 H - - PK 293 1.0 2441.800 87.8 H - - PK 293 1.0 2482.500 51.9 V 54.0 -2.1 AVG 0 1.2									0	
Chain Target (dBm) Attenuator (dB) Software Setting A+B+C 10.0 12.0 Undamental Signal Field Strength Frequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters 2425.230 102.1 2425.230 102.1 2425.230 102.1 2425.230 102.1 2425.230 102.1 2425.230 104.5 V - - PK 0 1.2 2425.230 104.5 V - - 0 1.2 2425.230 104.5 V - - 0 1.2 2425.230 104.5 V - - 0 1.2 RB 100 kHz; VB: 100 kHz 2443.500 87.8 H - - - 0 1.2 RB 100 kHz; VB: 100 kHz MBz 2483.500 51.9 V 54.0 -2.1 AVG 0 1.2 2486.580<	Standard:	FCC Part 15	Subpart C (15.247), RSS	5 210				Class:	N/A
Chain Target (dBm) Attenuator (dB) Software Setting A+B+C 10.0 12.0 Undamental Signal Field Strength Terguency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters 24242.330 102.1 2 2434.470 108.7 V - - AVG 0 1.2 2 2432.330 10.0 2425.330 10.0 2425.330 10.0 2425.330 10.0 2425.330 10.0 2425.330 10.0 2425.330 10.0 2425.330 104.5 V - - 0 1.2 RB 100 kHz; VB: 100 kHz 483.5 MHz Band Edge Signal Field Strength Erequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters 2483.530 37.6 H <th< td=""><td></td><td></td><td></td><td>MUL-) 000</td><td></td><td></td><td></td><td></td><td></td><td></td></th<>				MUL-) 000						
Chain Target (dBm) Attenuator (dB) Software Setting A+B+C 10.0 12.0 undamental Signal Field Strength Frequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters 2452.330 102.1 V - - AVG 0 1.2 2434.470 108.7 V - - PK 0 1.2 24425.270 82.3 H - - PK 0 1.2 2452.270 82.3 H - - PK 293 1.0 2441.800 87.8 H - - 0 1.2 RB 100 kHz; VB: 100 kHz 483.5 MHz Band Edge Signal Field Strength - - 0 1.2 RB 100 kHz; VB: 100 kHz 2483.530 MHz dBµV/m V/H Limit Margin Pk/QP/Avg degre	un # 10, E		nei #9 (2452	IVINZ) - 00Z.		Settings			٦	
Indext Signal Field Strength Frequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters 2452.330 102.1 V - - AVG 0 1.2 243.470 108.7 V - - PK 0 1.2 2452.270 82.3 H - - PK 0 1.2 2452.330 104.5 V - - 0 1.2 RB 100 kHz; VB: 100 kHz 2453.300 104.5 V - - 0 1.2 RB 100 kHz; VB: 100 kHz 2483.500 51.9 V 54.0 -2.1 AVG 0 1.2 2423.530 2483.500 51.9 V 54.0 -2.1 AVG 0 1.2 2428.530 1.0 2486.580		Chain	Target	(dBm)			Software	e Settina		
undamental Signal Field Strength Frequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters		A+B+C		()		· /			-	
Frequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters 2452.330 102.1 V - - AVG 0 1.2 2434.470 108.7 V - - PK 0 1.2 2452.270 82.3 H - - PK 0 1.2 2452.270 82.3 H - - PK 293 1.0 2452.270 82.3 H - - 0 1.2 RB 100 kHz; VB: 100 kHz 2452.330 104.5 V - - 0 1.2 RB 100 kHz; VB: 100 kHz 2483.50 51.9 V 54.0 -2.1 AVG 0 1.2 2483.500 51.9 V 54.0 -16.4 AVG 293 1.0 2485.120 56.1 H										
MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters 2452.330 102.1 V - - AVG 0 1.2 243.4470 108.7 V - - PK 0 1.2 2432.230 102.1 V - - PK 0 1.2 243.470 108.7 V - - PK 0 1.2 243.230 108.7 V - - PK 293 1.0 2441.800 87.8 H - - PK 293 1.0 2452.330 104.5 V - - - 0 1.2 RB 100 kHz; VB: 100 kHz 483.5 MHz BaptV/m V/H Limit Margin Pk/QP/Avg degrees meters 2483.530 51.9 V 54.0 -2.1 AVG 0 1.2 2485.120 56.1 H 74.0<										
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Frequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters 2483.500 51.9 V 54.0 -2.1 AVG 0 1.2 2483.530 37.6 H 54.0 -16.4 AVG 293 1.0 2485.120 56.1 H 74.0 -17.9 PK 293 1.0 2486.580 71.7 V 74.0 -2.3 PK 0 1.2 RB 1 MHz; VB 10 Hz Average (Black Trace), RB=VB= 1MHz Peak (Blue Trace), Vertical 80.0 -	2452.330	104.5	V	-	-	-	0	1.2	RB 100 kHz	; VB: 100 kHz
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RB 1 MHz; VB 10 Hz Average (Black Trace), RB=VB= 1MHz Peak (Blue Trace), Vertical 80.0 75.0 70.0 65.0 60.0 90 60.0 90 60.0 90 60.0 90 50.0	MHz 2483.500 2483.530	dBμV/m 51.9 37.6	V/H V H	Limit 54.0 54.0	Margin -2.1 -16.4	AVG AVG	degrees 0 293	1.2 1.0		
80.0 - 75.0 - 70.0 - 70	MHz 2483.500 2483.530 2485.120	dBμV/m 51.9 37.6 56.1	V/H V H H	Limit 54.0 54.0 74.0	Margin -2.1 -16.4 -17.9	AVG AVG PK	degrees 0 293 293	1.2 1.0 1.0		
	MHz 2483.500 2483.530 2485.120 2486.580	dBμV/m 51.9 37.6 56.1 71.7	V/H V H H V	Limit 54.0 54.0 74.0 74.0	Margin -2.1 -16.4 -17.9 -2.3	AVG AVG PK PK	degrees 0 293 293 0	1.2 1.0 1.0 1.2		
40.0 -	MHz 2483.530 2483.530 2485.120 2486.580 RB 1 № 8 7 (W/MgP) = pn11 100 5 5 4	dBµV/m 51.9 37.6 56.1 71.7 MHz; VB 10 H 0.0 - 5.0 -	V/H V H V Iz Average (Limit 54.0 54.0 74.0 74.0 Black Trace)	Margin -2.1 -16.4 -17.9 -2.3	AVG AVG PK PK	degrees 0 293 293 0 lue Trace), ^v	1.2 1.0 1.0 1.2 Vertical	protopully	Np. Ly A. J. Marriel Law

35.0^{-|}, 2483.5 2486.0 2488.0 2490.0 2492.0 2494.0 2496.0 2498.0 2500

Frequency (MHz)

2500.0

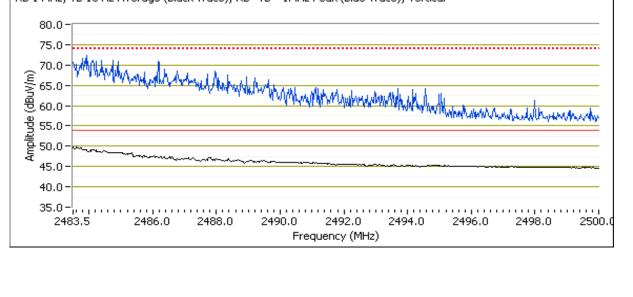
n # 2, Band Edge Field Strength - 802.11n HT20 Date of Test: 8/21/2009 Test Location: FT Chamber #3 Test Engineer: Mehran Birgani Config Change: None in # 2a, EUT on Channel #1 (2412MHz) - 802.11n HT20 Chain Target (dBm) Attenuator (dB) Software Setting A+B+C 10.0 14.0 ndamental Signal Field Strength equency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters 409.630 1.2 413.700 82.2 H - - PK 350 1.2 413.700 82.2 H - - PK 300 1.0 410.200 91.5 H - - PK 300 1.0 410.200 91.5 H - - 350 1.2 RB 100 kHz; VB: 100 kHz 90 MHz Band Edge Signal Field Strength Equency Level Pol 15.209 / 15.247 Detector Azimuth <th>Client:</th> <th>Proxim Corp</th> <th>oration</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>Job Number:</th> <th>J75847</th>	Client:	Proxim Corp	oration						Job Number:	J75847
Contact: Vaylo Tankov Account Manager: - Standard: FCC Part 15 Subpart C (15.247), RSS 210 Class: N/A n # 2, Band Edge Field Strength - 802.11n HT20 Date of Test: 8/21/2009 Test Location: FT Chamber #3 Test Engineer: Mehran Birgani Config Change: None n # 2a, EUT on Channel #1 (2412MHz) - 802.11n HT20 Chain Target (dBm) Attenuator (dB) Software Setting A+B+C Target (dBm) Attenuator (dB) Software Setting Attenuator (dB) 10.0 14.0 ndmental Signal Field Strength Equency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dByU/m V/H Limit Margin PKQPAvg degrees meters 100.0330 113.1 V - - PK 350 1.2 - 102.00 91.5 H - - PK 350 1.2 RB 100 kHz; VB: 100 kHz 90 MHz Band Edge Signal Field Strength Equency Level	Madal		000 11		-ll (00)			T·	-Log Number:	T75950
Standard FCC Part 15 Subpart C (15.247), RSS 210 Class: N/A un # 2, Band Edge Field Strength - 802.11n HT20 Date of Test: 8/21/2009 Test Location: FT Chamber #3 Config Change: None un # 2a, EUT on Channel #1 (2412MHz) - 802.11n HT20 End of Test: 8/21/2009 Test Location: FT Chamber #3 Config Change: None un # 2a, EUT on Channel #1 (2412MHz) - 802.11n HT20 Power Settings A+B+C 10.0 14.0 undamental Signal Field Strength requency Level Pol 15.209 / 15.247 Datector Azimuth Height Comments v409.300 103.1 V - - AVG 350 1.2 v409.300 103.1 V - - AVG 350 1.2 v409.300 103.1 V - - AVG 350 1.2 v409.600 104.8 V - - PK 300 1.0 v409.600 104.8 V - - 350 1.2 2 v80 MHz Band Edge Signal Field Strength requency Level Pol 15.209 / 15.247 De	Model:	PROXIMB82	802.11abgn	MINIPCI MO	dule (3x3)			Acco	unt Manager:	-
Standard: FCC Part 15 Subpart C (15.247), RSS 210 Class: IV/A un # 2, Band Edge Field Strength - 802.11n HT20 Test Location: FT Chamber #3 Config Change: None tast Engineer: Mehran Birgani Config Change: None un # 2a, EUT on Channel #1 (2412MHz) - 802.11n HT20 Chain Target (dBm) Attenuator (dB) Software Setting ArB to Channel #1 (2412MHz) - 802.11n HT20 Undamental Signal Field Strength Trequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBi 100 kHz VB: 100 kHz VE Volspan="2">Volspan="2">Volspan="2">Volspan="2" Volspan="2" Volspan="2" Volspan="2" Volspan="2" Volspan="2" Volspan="2" Volspan="2" Volspan="2"	Contact:	Ivaylo Tanko	DV V							
Run # 2, Band Edge Field Strength - 802.11n HT20 Date of Test: 8/21/2009 Test Engineer: Mehran Birgani Test Location: FT Chamber #3 Config Change: None Run # 2a, EUT on Channel #1 (2412MHz) - 802.11n HT20 Chain Target (dBm) Attenuator (dB) Software Setting Attenuator (dB) Ar. B+C 10.0 14.0 Frequency Level Poil Detector Azimuth Height Comments MHz dBju/lin VH Limit Margin PK/QP/Avg degrees meters 2409.330 103.1 V - - PK 330 1.2 2409.030 103.1 V - - PK 300 1.0 2409.630 103.1 V - - PK 300 1.0 2409.600 104.8 V - - 350 1.2 2 2390.000 53.1 V - - 350 1.2 2 2389.870 37.0 H 54.0 17.0		·		15.247). RS	S 210				Class:	N/A
Date of Test: 8/21/2009 Test Location: FT Chamber #3 Test Engineer: Mehran Birgani Config Change: None tur #2a, EUT on Channel #1 (2412MHz) - 802.11n HT20 Chain Target (dBm) Attenuator (dB) Software Setting A+B+C 10.0 14.0 tur #2a, EUT on Channel #1 (2412MHz) - 802.11n HT20 tur #2a, EUT on Channel #1 (2412MHz) - 802.11n HT20 tur #2a, EUT on Channel #1 (2412MHz) - 802.11n HT20 tur #2a, EUT on Channel #1 (2412MHz) - 802.11n HT20 tur #2a, EUT on Channel #1 (2412MHz) - 802.11n HT20 tur #2a, EUT on Channel #1 (2412MHz) - 802.11n HT20 tur #2a, EUT on Channel #1 (2412MHz) - 802.11n HT20 tur #2a, EUT on Channel #1 (2412MHz) - 802.11n HT20 tur #2a, EUT on Channel #1 (2412MHz) - 802.11n HT20 tur #2 digu/m MHz target (dBm) The Euclose Azimuth Height Comments MHz tur #2 digu/m VH Cheele Signal Field Strength Tequency Level Pol 15.209 / 15.247 Detector	o tantaana.			,						
Config Change: None un # 2a, EUT on Channel #1 (2412MHz) - 802.11n HT20				- 802.11n H	T20	т.				
Run # 2a, EUT on Channel #1 (2412MHz) - 802.11 n HT20 Chain Target (dBm) Attenuator (dB) Software Setting A+B+C 10.0 14.0 Sundamental Signal Field Strength Erequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments 2409.630 0.3.1 V - AVG 350 1.2 2409.330 113.1 V - PK 350 1.2 2409.330 10 2409.630 10.0 2409.600 10.4 V - - AVG 300 1.0 2409.600 104.8 V - - 350 1.2 2409.000 104.8 V - - 350 1.2 239.870 37.0 H 54.0 -7.0 AVG 300 1.0 239.870 350 1.2 239.870 329.730 49.5 H 74.0 6.2 PK 350 1.2 238.9730 1.0 238.9730 1.0 239				ani					er #S	
Chain Target (dBm) Attenuator (dB) Software Setting A+B+C 10.0 14.0 Undamental Signal Field Strength Traget (dBm) Attenuator (dB) Software Setting Prequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments WHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters 2409.630 103.1 V - - AVG 350 1.2 2409.330 113.1 V - - PK 350 1.2 2410.200 91.5 H - - PK 300 1.0 2409.600 104.8 V - - 350 1.2 RB 100 kHz; VE: 100 kHz 390 MHz Band Edge Signal Field Strength Trequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments 389.870 37.0 H 54.0 -0.9 AVG 35	10	ot Engineer.	Merinari Dirg			001	ing ondingo.	None		
Chain Target (dBm) Attenuator (dB) Software Setting A+B+C 10.0 14.0 undamental Signal Field Strength requency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters 2409.630 103.1 V - - AVG 3500 1.2 2409.630 103.1 V - - PK 350 1.2 2409.630 103.1 V - - PK 300 1.0 2413.700 82.2 H - - PK 300 1.0 2409.600 104.8 V - - 350 1.2 RB 100 kHz; VB: 100 kHz 2390 MHz Eade Edge Signal Field Strength requency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµV/m V/H	un # 2a, E	UT on Chan	nel #1 (2412	MHz) - 802. ⁻	11n HT20					
Iarget (dsm) Attenuator (ds) Software Setting A+B+C 10.0 14.0 Strudamental Signal Field Strength Frequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments 2409.630 103.1 V - AVG 350 1.2 2409.630 103.1 V - PK 350 1.2 2409.630 10.1 V - PK 350 1.2 2409.630 10.4 V - - PK 350 1.2 2409.600 104.8 V - - - 350 1.2 RB 100 kHz; VB: 100 kHz 390 MHz Band Edge Signal Field Strength - - 350 1.2 RB 100 kHz; VB: 100 kHz 2390.000 53.1 V 54.0 -0.9 AVG 350 1.2 - 2389.870 37.0 H 54.0 -0.9 AVG 350 1.2 -	-			•	Power					
undamental Signal Field Strength Frequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments 2409.630 103.1 V - - AVG 350 1.2 2409.630 103.1 V - - PK 350 1.2 2409.330 113.1 V - - PK 350 1.2 2413.700 82.2 H - - PK 300 1.0 2410.200 91.5 H - - PK 300 1.0 2409.600 104.8 V - - 350 1.2 RB 100 kHz; VB: 100 kHz 390 MHz Badge Signal Field Strength - - 350 1.2 RB 100 kHz; VB: 100 kHz 2389.870 37.0 H 54.0 -17.0 AVG 350 1.2 2389.870 67.8 V 74.0 -6.2 PK 350 1.2		Unain	Target	(dBm)	Attenua	ator (dB)	Software	e Setting		
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Frequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµ//m V/H Limit Margin Pk/QP/Avg degrees meters 2409.630 103.1 V - - AVG 350 1.2 2413.700 82.2 H - - PK 350 1.2 2413.700 82.2 H - - PK 330 1.0 2409.600 104.8 V - - PK 330 1.0 2409.600 104.8 V - - - 350 1.2 RB 100 kHz; VB: 100 kHz 390 MHz Band Edge Signal Field Strength - - 350 1.2 2389.70 37.0 H 54.0 -0.9 AVG 350 1.2 2389.80 1.0 2389.70 32.1 2 2 2 2 2 2 2 2 2 2 2										
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2413.700 82.2 H - - AVG 300 1.0 2410.200 91.5 H - - PK 300 1.0 2409.600 104.8 V - - - 350 1.2 RB 100 kHz; VB: 100 kHz 2390 MHz Band Edge Signal Field Strength Frequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters 2389.870 37.0 H 54.0 -17.0 AVG 350 1.2 2389.870 57.1 V 54.0 -0.9 AVG 350 1.2 2389.330 67.8 V 74.0 -6.2 PK 300 1.0 2389.730 49.5 H 74.0 -24.5 PK 300 1.0 65.0 - - - - - - - -				-	-					
2410.200 91.5 H - - PK 300 1.0 2409.600 104.8 V - - 350 1.2 RB 100 kHz; VB: 100 kHz 2390 MHz Band Edge Signal Field Strength Frequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin PK/QP/Avg degrees meters 2389.870 37.0 H 54.0 -17.0 AVG 300 1.0 2389.870 37.1 V 54.0 -0.9 AVG 350 1.2 2389.330 67.8 V 74.0 -6.2 PK 350 1.2 2389.730 49.5 H 74.0 -24.5 PK 300 1.0				-	-					
2409.600 104.8 V - - 350 1.2 RB 100 kHz; VB: 100 kHz 2390 MHz Band Edge Signal Field Strength Frequency Level Pol 15:209 / 15:247 Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters 2399.000 53.1 V 54.0 -17.0 AVG 350 1.2 2389.870 49.5 H 74.0 -6.2 PK 350 1.2 2389.730 49.5 H 74.0 -24.5 PK 300 1.0 RB 1 MHz; VB 10 Hz Average (Black Trace), RB=VB= 1MHz Peak (Blue Trace), Vertical 80.0 -75.0 -70.0 -75.0 -70.0 -75.0 -75.0 -70.0 -75.0 -70.0 -75.0 -70.0 -75.0 -70.0 -75.0 -70.0 -70.0 -70.0 -70.0 -70.0 -70.0 -70.0 -70.0 -70.0 -70.0 -70.0 -70.0 -70.0 -70.				-	-					
2390 MHz Band Edge Signal Field Strength Frequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters 2389.870 37.0 H 54.0 -17.0 AVG 300 1.0 2389.870 37.0 H 54.0 -0.9 AVG 350 1.2 2389.330 67.8 V 74.0 -6.2 PK 350 1.2 2389.730 49.5 H 74.0 -24.5 PK 300 1.0				-	-	PK				
Frequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters 2389.870 37.0 H 54.0 -17.0 AVG 300 1.0 2389.870 37.0 H 54.0 -0.9 AVG 350 1.2 2389.330 67.8 V 74.0 -6.2 PK 350 1.2 2389.730 49.5 H 74.0 -24.5 PK 300 1.0	2409.600	104.8	V	-	-	-	350	1.Z	RB 100 KHZ	; VB: 100 KHZ
Frequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters 2389.870 37.0 H 54.0 -17.0 AVG 300 1.0 2389.870 37.0 H 54.0 -0.9 AVG 350 1.2 2389.330 67.8 V 74.0 -6.2 PK 350 1.2 2389.730 49.5 H 74.0 -24.5 PK 300 1.0	200 MH- E	and Edga S	ianal Field S	tronath						
MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters 2389.870 37.0 H 54.0 -17.0 AVG 300 1.0 2389.870 37.0 H 54.0 -17.0 AVG 300 1.0 2389.870 37.0 H 54.0 -0.9 AVG 350 1.2 2389.300 67.8 V 74.0 -6.2 PK 350 1.2 2389.730 49.5 H 74.0 -24.5 PK 300 1.0					/ 15 247	Detector	Azimuth	Height	Comments	
2389.870 37.0 H 54.0 -17.0 AVG 300 1.0 2390.000 53.1 V 54.0 -0.9 AVG 350 1.2 2389.330 67.8 V 74.0 -6.2 PK 350 1.2 2389.730 49.5 H 74.0 -24.5 PK 300 1.0 RB 1 MHz; VB 10 Hz Average (Black Trace), RB=VB= 1MHz Peak (Blue Trace), Vertical 80.0 - 70.0 - - - - - - - 65.0 - - - - - - - 90 60.0 - - - - - - 90 55.0 - - - - - - - 91 50.0 -									Commento	
2390.000 53.1 V 54.0 -0.9 AVG 350 1.2 2389.300 67.8 V 74.0 -6.2 PK 350 1.2 2389.730 49.5 H 74.0 -24.5 PK 300 1.0 RB 1 MHz; VB 10 Hz Average (Black Trace), RB=VB= 1MHz Peak (Blue Trace), Vertical 80.0 -						Č.				
2389.330 67.8 V 74.0 -6.2 PK 350 1.2 2389.730 49.5 H 74.0 -24.5 PK 300 1.0 RB 1 MHz; VB 10 Hz Average (Black Trace), RB=VB= 1MHz Peak (Blue Trace), Vertical 80.0 - - - - 70.0 - - - - - 65.0 - - - - - - 99 55.0 - - - - - - 99 55.0 - - - - - - - 99 55.0 -										
2389.730 49.5 H 74.0 -24.5 PK 300 1.0 RB 1 MHz; VB 10 Hz Average (Black Trace), RB=VB= 1MHz Peak (Blue Trace), Vertical 80.0 - <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>										
RB 1 MHz; VB 10 Hz Average (Black Trace), RB=VB= 1MHz Peak (Blue Trace), Vertical 80.0 75.0 70.0 65.0 65.0 65.0 65.0 65.0 65.0 65.0 60.0 45.0 45.0 2350 2355 2350 2355 2350 2355 2350 2355 2350 2355 2360 2365 2370 2375 2380 2385										
80.0- 75.0- 70.0- 65.0- 65.0- 901 65.0- 40.0- 35.0- 2350 2355 2360 2365 2370 2375 2380 2385 2390				-				-	-1	
75.0 - 70.0 - 70.0 - 65.0 - 60.0 - 9000 55.0 - 45.0 - 45.0 - 2350 2355 2360 2365 2370 2375 2380 2385 2390	RB 1	MHz; VB 10	Hz Average	(Black Trace	e), RB=VB=	1MHz Peak (i	Blue Trace),	Vertical		
70.0 65.0 65.0 60.0 99 55.0 40.0 35.0 2350 2355 2360 2365 2370 2375 2380 2385 2390	-	80.0-								
45.0 - 40.0 - 35.0 - 2350 2355 2360 2365 2370 2375 2380 2385 2390	· · ·	75.0-								
45.0 - 40.0 - 35.0 - 2350 2355 2360 2365 2370 2375 2380 2385 2390		70.0-								L. L. Market
45.0 - 40.0 - 35.0 - 2350 2355 2360 2365 2370 2375 2380 2385 2390	- E	65.0-							1.	and the second second
45.0 - 40.0 - 35.0 - 2350 2355 2360 2365 2370 2375 2380 2385 2390	l mg							1 1 M	under der anter filler	and the second sec
45.0 - 40.0 - 35.0 - 2350 2355 2360 2365 2370 2375 2380 2385 2390) 0		1.1.1		L. L. L. March & March	the had a dear to the line	amon market	Kowally Converse		
45.0 - 40.0 - 35.0 - 2350 2355 2360 2365 2370 2375 2380 2385 2390	itud		www.plantin.chydr	et bronde when die	Adore a strategy	ar at off a				
45.0 - 40.0 - 35.0 - 2350 2355 2360 2365 2370 2375 2380 2385 2390	d d	50.0-								1. Martinet
35.0 – 2350 2355 2360 2365 2370 2375 2380 2385 2390		45.0-								
35.0 – 2350 2355 2360 2365 2370 2375 2380 2385 2390		40.0-								
2350 2355 2360 2365 2370 2375 2380 2385 2390										
		2350 - ¦ 2350	2355	2360	2365	2370	1 237	5 2	380 2	385 2390
						ricquericy	(11112)			

Client: Proxim Corporation

	Proxim Corp	oration						Job Number:	J75847
Madal		000 11-6	miniDOL	dula (2+2)			T-	Log Number:	T75950
wodel:	PROXMB82	ouz.Trabgn		uule (3X3)			Acco	unt Manager:	-
Contact:	Ivaylo Tanko	v							
Standard:	FCC Part 15	Subpart C (15.247), RSS	5 210				Class:	N/A
≀un # 2b, E	UT on Chan	nel #11 (246	62MHz) - 802		0.11			7	
	Chain	Townst	(dDma)		Settings	Cofficient	Catting		
	A+B+C	Target	(dBm)		ator (dB) 0.0		e Setting	-	
l	A+B+C			1	0.0	14	F.U		
undament	al Signal Fie	ld Strenath							
Frequency	Level	Pol		/ 15.247	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters		
2458.000	103.3	V	-	-	AVG	346	1.2		
2460.870	112.8	V	-	-	PK	346	1.2		
2460.600	86.0	Н	-	-	AVG	295	1.0		
2457.600	94.4	Н	-	-	PK	295	1.0		
2461.530	103.9	V	-	-	-	346	1.2	RB 100 kHz	; VB: 100 kHz
0400 E MILI-	Dond Educ	Signal Field	l Strangth						
Frequency	Band Edge Level	Pol		/ 15.247	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	Comments	
	ubμv/m	V/II							
2483 530	52 2								
	52.2 38.2	V	54.0	-1.8	AVG	347	1.2		
2483.530	38.2	V H	54.0 54.0	-1.8 -15.8	AVG AVG	347 295	1.2 1.0		
2483.530 2483.580 2485.640	38.2 52.3 68.8	V H H V	54.0 54.0 74.0 74.0	-1.8 -15.8 -21.7 -5.2	AVG AVG PK PK	347 295 295 347	1.2 1.0 1.0 1.2		
Amplitude (dBuV/m) A co co 00 00 2 2 00	38.2 52.3 68.8	V H V Hz Average	54.0 54.0 74.0 74.0 (Black Trace	-1.8 -15.8 -21.7 -5.2), RB=VB=	AVG AVG PK PK 1MHz Peak (E	347 295 295 347	1.2 1.0 1.0 1.2 Vertical		Market with

	: Proxim Corp	oration						Job Number:	J75847
Model	: PROXMB82	802 11aban	miniPCImo	dula (3v3)			T-	Log Number:	T75950
NOUEI		ouz. Habyn					Acco	unt Manager:	-
Contact	: Ivaylo Tanko	V							
Standard	: FCC Part 15	Subpart C (15.247), RS	S 210				Class:	N/A
	and Edge Fie		- 802.11g		_				
	Date of Test:					st Location:		er #3	
16	est Engineer:	Joseph Cad	igai		Con	ifig Change:	None		
un # 3a F	EUT on Chan	nel #1 (2412	MHz) - 802	11a					
un # 00, E			11112) 002.		Settings			7	
	Chain	Target	(dBm)		ator (dB)	Software	e Setting		
	А			1	0.0	14	1.5		
	tal Signal Fie		45.000	145.047		A 1 11			
		Pol		/ 15.247	Detector	Azimuth	Height	Comments	
MHz 2411.070	dBµV/m 103.8	V/H V	Limit	Margin	Pk/QP/Avg AVG	degrees 349	meters 1.2		
2411.070	103.0	V	-	-	PK	349 349	1.2		
2415.630	83.2	H	-	-	AVG	298	1.2		
2418.970	93.2	H	-	-	PK	298	1.0		
2407.470	103.7	V	-	-	-	349	1.2	RB 100 kHz	; VB: 100 kHz
Frequency MHz	Band Edge S Level dBµV/m	Pol V/H		/ 15.247 Margin	Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments	
2390.000	52.9	V	54.0	-1.1	AVG	349	1.2		
2390.000	37.0	H	54.0	-17.0	AVG	298	1.0		
2389.470	49.4	Н	74.0	-24.6	PK	298	1.0		
2389.870	70.9	V	74.0	-3.1	PK	349	1.2		
RB 1	MHz; VB 10 H	lz Average ((Black Trace), RB=VB=	1MHz Peak (E	lue Trace),	Vertical		
	80.0-								
	75.0-								
	70.0-								, <u>, , , , , , , , , , , , , , , , , , </u>
Ê							L	al trade	C.K. MARANA AND
Buy	65.0-						640	WWW.WWWW	փուլ.
e (d	60.0-	de comencia da		manande	when the talkes the	with the mapping the	where the a		
1 12	55.0-	M. P. W. Martinetter	n ar de la construcción de la const	A DE RECEIVE A CAL	100.000				and an and and and
ld wy	50.0-							المعاصير وروا	warmen and
	45.0-				<u></u>		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
	40.0-								
	35.0-								
	2350	2355	2360	2365		237			85 2390

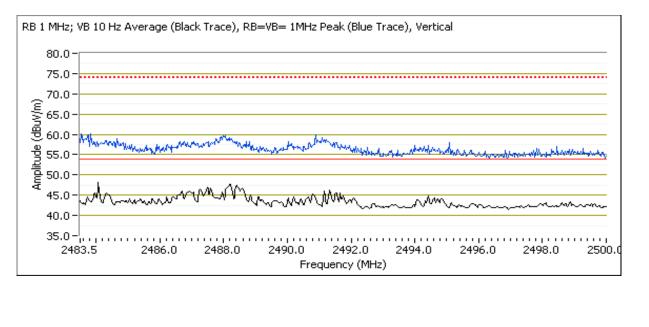
Elliott EMC Test Data Client: Proxim Corporation Job Number: J75847 T-Log Number: T75950 Model: PROXMB82 802.11abgn miniPCI module (3x3) Account Manager: Contact: Ivaylo Tankov Standard: FCC Part 15 Subpart C (15.247), RSS 210 Class: N/A Run # 3b, EUT on Channel #11 (2462MHz) - 802.11g Power Settings Chain Target (dBm) Attenuator (dB) Software Setting А 10.0 14.5 Fundamental Signal Field Strength 15.209 / 15.247 Frequency Level Pol Detector Azimuth Height Comments MHz dBµV/m V/H Margin Pk/QP/Avg degrees meters Limit 2461.330 104.4 AVG V 347 1.2 --٧ ΡK 2457.100 113.9 347 1.2 --Η AVG 295 1.0 2460.510 85.7 --2460.560 95.2 Н ΡK 295 1.0 --2460.900 104.5 V 347 1.2 RB 100 kHz; VB: 100 kHz _ _ _ 2483.5 MHz Band Edge Signal Field Strength 15.209 / 15.247 Frequency Level Pol Detector Azimuth Height Comments V/H MHz dBµV/m Margin Pk/QP/Avg degrees Limit meters 2483.530 52.6 ۷ 54.0 -1.4 AVG 347 1.2 2483.530 38.0 Н 54.0 -16.0 AVG 295 1.0 -21.6 ΡK 295 2483.800 52.4 Н 74.0 1.0 2483.990 70.9 V 74.0 PK 1.2 -3.1 347 RB 1 MHz; VB 10 Hz Average (Black Trace), RB=VB= 1MHz Peak (Blue Trace), Vertical 80.0



Client [.]	Proxim Corpo	Cration						Job Number:	J75847
chorit.							T.	-Log Number:	
Model:	PROXMB82	802.11abgn	miniPCI mod	dule (3x3)				ount Manager:	
Contact	Ivaylo Tanko						AUCU	uni manayet.	
				2 0 4 0				01	N1/A
Standard:	FCC Part 15	Subpart C (15.247), RSS	5210				Class:	IN/A
Ε	and Edge Fiel Date of Test: a est Engineer: .	8/21/2009				est Location: fig Change:		er #3	
Run # 4a. E	UT on Chanr	nel #1 (2412	MHz) - 802.1	11b					
,			1		Settings				
	Chain	Target	(dBm)	Attenua	ator (dB)	Software	v		
	A			1	0.0	15	i.5		
	tal Signal Fie		45.000	145.047		A 1. (1	11.2.17		
Frequency	Level	Pol		/ 15.247	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	V/H V	Limit	Margin	Pk/QP/Avg	degrees	meters		
2410.400 2411.170	108.9 114.2	V	-	-	AVG PK	347 347	1.2 1.2		
2411.170 2413.030	88.7	V H	-	-	AVG	347 296	1.2	-	
2413.030	92.4	H	-	-	PK	290	1.0		
2413.630	110.1	V	-	-	FN	347	1.0	RB 100 kHz	; VB: 100 kHz
2410.000	110.1	v	_	_	_	547	1.2		, VD. 100 KHZ
2390 MHz E	Band Edge Si	anal Field S	Strenath						
Frequency	Level	Pol	15.209	/ 15.247	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	1	
2385.530	52.2	٧	54.0	-1.8	AVG	347	1.2		
2388.270	36.6	Н	54.0	-17.4	AVG	296	1.0		
2379.600	47.3	Н	74.0	-26.7	PK	296	1.0		
2389.670	53.9	V	74.0	-20.1	PK	347	1.2		
Amplitude (dBuV/m)	MHz; VB 10 H 80.0 - 75.0 - 70.0 - 65.0 - 55.0 - 55.0 - 50.0 - 45.0 - 40.0 -	yanday Jack Allan 	Minnin	lunu dan shaka	ho-Mandora No-Mandora	and a state of the	hand and the set	uuuuuuu	
	2350	2355	2360	2365	2370	237 (MHz)	5 2	380 2	385 2390

Elliott EMC Test Data Client: Proxim Corporation Job Number: J75847 T-Log Number: T75950 Model: PROXMB82 802.11abgn miniPCI module (3x3) Account Manager: Contact: Ivaylo Tankov Standard: FCC Part 15 Subpart C (15.247), RSS 210 Class: N/A Run # 4b, EUT on Channel #11 (2462MHz) - 802.11b Power Settings Chain Target (dBm) Attenuator (dB) Software Setting 10.0 А 17.5 Fundamental Signal Field Strength 15.209 / 15.247 Frequency Level Pol Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters 2463.370 110.6 V AVG 347 1.1 --٧ 2459.530 113.0 ΡK 347 1.1 --93.4 Η AVG 297 1.0 2463.000 --297 2461.230 97.4 Н ΡK 1.0 --2461.670 110.5 V 347 1.1 RB 100 kHz; VB: 100 kHz _ _ -2483.5 MHz Band Edge Signal Field Strength 200 / 15 2/7 Data

Frequency	Level	Pol	15.209	/ 15.247	Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2487.650	37.9	Н	54.0	-16.1	AVG	297	1.0	
2488.500	49.6	V	54.0	-4.4	AVG	347	1.1	
2483.690	47.5	Н	74.0	-26.5	PK	297	1.0	
2491.010	58.0	V	74.0	-16.0	PK	347	1.1	



EMC Test Data

	An ZAZAD company		
Client:	Proxim Corporation	Job Number:	J75847
Model	PROXMB82 802.11abgn miniPCI module (3x3)	T-Log Number:	T75950
MOUEI.	FROAMBOZ 802. Habyn minif of module (3x3)	Account Manager:	-
Contact:	Ivaylo Tankov		
Standard:	FCC Part 15 Subpart C (15.247), RSS 210	Class:	N/A

RSS 210 and FCC 15.247 (DTS) Radiated Spurious Emissions

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing. All remote support equipment was located approximately 30 meters from the EUT with all I/O connections running on top of the groundplane. For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Summary of Results - Device Operating in the 2400-2483.5 MHz Band

Spurious measurements made at the highest output power setting to cover use of lower gain antennas at those power settings. A 20dB attenuator was used in series with each sector antenna and a 10dB attenuator was used in series with each panel antenna.

utternuuto		i Series with	500101 500101 0			ed in series with edon pu	nor unterina.
Run #	Mode	Channel	Attenuator (dB)	Power Setting	Test Performed	Limit	Result / Margin
1-		lau.	00.0	10.0	Radiated Emissions,	FCC Part 15.209 /	52.7dBµV/m @
1a	802.11b	low	20.0	18.0	1 - 26 GHz	15.247(c)	4924.0MHz (-1.3dB)
16			20.0	10.0	Radiated Emissions,	FCC Part 15.209 /	48.6dBµV/m @
1b	Sector	center	20.0	19.0	1 - 26 GHz	15.247(c)	4873.9MHz (-5.4dB)
4	Antenna	h ta h	00.0	40 F	Radiated Emissions,	FCC Part 15.209 /	49.7dBµV/m @
1c		high	20.0	18.5	1 - 26 GHz	15.247(c)	4924.1MHz (-4.3dB)
2a	HT20	low	Not	tested - 802.	.11b mode tested as wors	t case based on results for	or center channel
01-	A+B+C		00.0	10.0	Radiated Emissions,	FCC Part 15.209 /	38.5dBµV/m @
2b	Sector	center	20.0	19.0	1 - 26 GHz	15.247(c)	4875.0MHz (-15.5dB)
2c	Antenna	high	Not	tested - 802.	.11b mode tested as wors	t case based on results for	or center channel
2-		law	10.0	19	Radiated Emissions,	FCC Part 15.209 /	50.3dBµV/m @
3a	802.11b	low	10.0	19	1 - 26 GHz	15.247(c)	1412.5MHz (-3.7dB)
3b	Panel	center	10.0	20	Radiated Emissions,	FCC Part 15.209 /	49.4dBµV/m @
30		Center	10.0	20	1 - 26 GHz	15.247(c)	1375.8MHz (-4.6dB)
3c	Antenna	high	10.0	19	Radiated Emissions,	FCC Part 15.209 /	48.8dBµV/m @
JU		nign	10.0	19	1 - 26 GHz	15.247(c)	1366.7MHz (-5.2dB)
4a	HT20	center	10.0	19	Radiated Emissions,	FCC Part 15.209 /	49.0dBµV/m @
4a	A+B+C	Cerilei	10.0	19	1 - 26 GHz	15.247(c)	1394.2MHz (-5.0dB)
4b	Panel	Low high	Not	tested - 802.	11b mode tested as wors	t case based on results fo	or center channel

Client [.]	Proxim Corp	oration						Job Number:	J75847
								Log Number:	
Model:	PROXMB82	802.11abgn	miniPCI mo	dule (3x3)				unt Manager:	
Contact:	Ivaylo Tanko	ov							
Standard:	FCC Part 15	5 Subpart C (15.247), RSS	S 210				Class:	N/A
Ambient	Condition	s:		emperature: el. Humidity:					
			IX.	ei. Humiuity.	52-50	/0			
				26000 MHz.	Operating M				
	Date of Test: est Engineer:			izzi		est Location: ifig Change:		er #4, FT Cha	mber #3
ie	ы спушеет.	wenan Dig	ani, Junin Ca	112 2 1	COL	ing change.			
Run #1a: L	ow Channel	@ 2412 MH	z - Sector A	ntenna with	software se	tting of 18.0) dBm		
	undamental e	mission lave	l @ 3m in 1 0		00 5	dBµV/m	1		
			tside of restr			dBμV/m dBμV/m	Limit is -300	Bc (UNII pov	ver measurement)
							-	χ τ ⁻	-7
Spurious E Frequency		Pol	15 200	/ 15.247	Detector	Azimuth	Height	Comments	
MHz	Level dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	Comments	
4923.980	52.7	V	54.0	-1.3	AVG	133	1.0		
9848.060	44.9	V	54.0	-9.1	AVG	169	1.2		
4924.020	54.5	V	74.0	-19.5	PK	133	1.0		
9847.830	50.9	V	74.0	-23.1	PK	169	1.2		
Note 1:	For emissior	ns in restricte	ed bands, the	limit of 15.2	09 was used.	For all othe	er emissions,	the limit was	set 30dB below the
			and measure						
Note 2:					igent restricte				
Note 3:	No signal wa	as tound abo	ve tughz, it	was searche	ed manually fo	or narmonics	5.		
	80.0-								
	50.0								
	70.0-								
E									
- Ab	60.0-								
9 9			_						
Amplitude (dBuV/m)	50.0- J.		1		1		M	weller .	Alt Marsh water
					لي يعلم ياليعو	ANTE HAN MARKAN	www	Murridya	and the state of t
	40.0-40		-	N. Jacobson and Provide State					
	30.0-		P						
	1000 20	00 40	100 60						5000 18000

Client: Proxim Corporation Model: PROXMB82 802.11abgn miniPCI module (3x3) Contact: Ivaylo Tankov Standard: FCC Part 15 Subpart C (15.247), RSS 210 Run #1b: Center Channel @ 2437 MHz - Sector Antenna with software setting = 19.0 dBm

Fundamental Signal Field Strength: Peak value measured in 100kHz

Frequency	Level	Pol	15.209	/ 15.247	Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2436.270	103.1	V	120.0	-16.9	PK	0	1.15	RB = VB = 100kHz

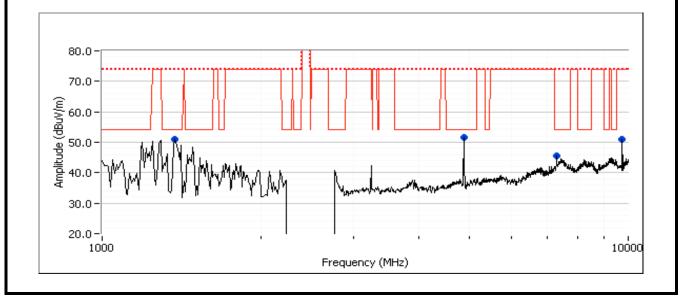
Fundamental emission level @ 3m in 100kHz RBW:	103.1 dBµV/m	`
Limit for emissions outside of restricted bands:	73.1 dBµV/m	Limit is -30dBc (UNII power measurement)

Spurious Emissions

Frequency	Level	Pol	15.209	/ 15.247	Detector	Azimuth	Height	Comments
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
1375.830	51.0	V	54.0	-3.0	Peak	270	2.5	
7310.830	45.6	V	54.0	-8.4	Peak	169	1.3	
9749.170	51.0	V	73.1	-22.1	Peak	308	1.6	
4873.900	48.6	V	54.0	-5.4	AVG	226	1.00	
7309.560	40.9	V	54.0	-13.1	AVG	189	1.29	
1391.500	37.5	V	54.0	-16.5	AVG	313	2.41	
1392.360	56.4	V	74.0	-17.6	PK	313	2.41	
4874.180	51.7	V	74.0	-22.3	PK	226	1.00	
7312.260	49.8	V	74.0	-24.2	PK	189	1.29	

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: No signal was found above 10GHz, it was searched manually for harmonics.



EMC Test Data

Job Number: J75847 T-Log Number: T75950

Class: N/A

Account Manager:

Elliott EMC Test Data Client: Proxim Corporation Job Number: J75847 T-Log Number: T75950 Model: PROXMB82 802.11abgn miniPCI module (3x3) Account Manager: Contact: Ivaylo Tankov Standard: FCC Part 15 Subpart C (15.247), RSS 210 Class: N/A Run #1c: High Channel @ 2462 MHz - Sector Antenna with software setting = 18.5 dBm. Fundamental emission level @ 3m in 100kHz RBW: 99.4 dBµV/m Limit for emissions outside of restricted bands: 69.4 dBµV/m Limit is -30dBc (UNII power measurement) Spurious Emissions 15.209 / 15.247 Frequency Level Pol Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters 54.0 -2.5 46 1.00 1412.500 51.5 Н Peak -5.7 292 0.99 4914.170 48.3 V 54.0 Peak 50.7 9848.330 V 69.4 -18.7 285 1.29 Peak 49.7 V 54.0 291 1.66 4924.050 -4.3 AVG -17.3 1391.170 36.7 Н 54.0 AVG 67 1.00 1396.830 ΡK Η 74.0 -18.8 67 1.00 55.2 4924.070 51.9 V 74.0 -22.1 PK 291 1.66 For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the Note 1 level of the fundamental and measured in 100kHz. No signal was found above 10GHz, it was searched manually for harmonics. Note 2: 80.0 70.0 Amplitude (dBuV/m) 60.0 50.0 40.0 30.0 20.0 10000 1000 Frequency (MHz)

Model: PRO Contact: Ivaylo Standard: FCC Run #2: Radiate	m Corporation XMB82 802.11ab	gn miniPCI mo	dule (3x3)				Job Number: J75847
Contact: Ivaylo Standard: FCC Run #2: Radiated	o Tankov	-	dule (3x3)				
Contact: Ivaylo Standard: FCC Run #2: Radiate	o Tankov	-	dule (3x3)			T-	Log Number: T75950
Standard: FCC		2 (15 247) RS				Acco	unt Manager: -
Run #2: Radiate	Part 15 Subpart (C (15 247) RS					
		~ 10.271 , 100	5 210				Class: N/A
Test Eng : Center	of Test: 8/6/2009 gineer: John Caiz • Channel @ 243	zi 7 MHz - Sector	· Antenna w	Te Cor ith software	est Location: ifig Change:	FT Chambe none	
	inal Field Streng			1			
	evel Pol		/ 15.247	Detector	Azimuth	Height	Comments
	uV/m V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	
2435.070 10	0.6 V	120.0	-19.4	PK	354	1.2	RB = VB = 100kHz
Fundam	nental emission le	vel @ 3m in 1(0kHz RBW:	100.6	dBµV/m		
	mit for emissions				dBµV/m	Limit is -300	dBc (UNII power measurement)
numieure Enstant							
Frequency Le	ons evel Pol	15 200	/ 15.247	Detector	Azimuth	Height	Comments
	uV/m V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	Comments
	1.3 H	54.0	-2.7	Peak	42	1.0	
	2.8 H	54.0	-11.2	Peak	318	1.3	
	6.3 V	70.6	-24.3	Peak	351	1.0	
	8.5 V	54.0	-15.5	AVG	165	1.11	
	7.2 H	54.0	-16.8	AVG	314	1.27	
1391.430 30	6.4 H	54.0	-17.6	AVG	66	1.00	
1397.170 50	6.0 H	74.0	-18.0	PK	66	1.00	
4874.160 5 ⁻	1.5 V	74.0	-22.5	PK	165	1.11	
4873.700 49	9.1 H	74.0	-24.9	PK	314	1.27	
Note 1: level	missions in restrie of the fundament gnal was found a	al and measure	ed in 100kHz				, the limit was set 30dB below the

								EMO	C Test Dat
Client:	Proxim Corp	oration						Job Number:	J75847
Madal	PROXMB82	802 11ahan	miniPCI	4ulo (3v3)			T-	Log Number:	T75950
	Ivaylo Tanko						Acco	unt Manager:	-
	FCC Part 15		15.247), RSS	5 2 1 0				Class:	N/A
Ľ	adiated Spur Date of Test: est Engineer:	9/1/2009		26000 MHz.		ode: 802.11 est Location: afig Change:	FT Chambe		
	ow Channel. Ial Signal Fie	•			n 100kHz				
requency		Pol	15.209/		Detector	Azimuth	Height	Comments	
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	9	meters		
411.130	112.7	V	-	-	Pk	0	1.2		;; VB: 100 kHz
415.670	88.5	Н	-	-	Pk	301	1.0	RB 100 kHz	;; VB: 100 kHz
	missions	Pol	tside of restri			dBµV/m			ver measurement)
requency MHz	Level dBµV/m	Poi V/H			Detector	Azimuth	Height	Comments	
					$D \nu / (D / \Lambda v \alpha)$	dogroos	motors		
			Limit 54.0	Margin	Pk/QP/Avg Peak	degrees 148	meters	Peak readin	a w/ average limit
412.500 822.500	50.3 47.6 For emission	H V	54.0 54.0 d bands, the	-3.7 -6.4 limit of 15.2	Peak Peak 09 was used.	148 259	1.2 1.0		g w/ average limit
412.500 822.500 Note 1: Note 2: Note 3:	50.3 47.6 For emissior level of the f Signal is not	H V ns in restricte undamental in a restricte	54.0 54.0 d bands, the and measure ed band but th	-3.7 -6.4 limit of 15.2 d in 100kHz ne more strir	Peak Peak 09 was used.	148 259 For all othe	1.2 1.0 er emissions was used.		

	An AZ	- / /							
Client:	Proxim Corp	oration						Job Number:	J75847
Ma al d		000 11-6		dula (0:-0)			T-	Log Number:	T75950
Model:	PROXMB82	802.11abgn		dule (3x3)			Accou	unt Manager:	-
Contact:	Ivaylo Tanko	V							
	FCC Part 15		15.247), RS	S 210				Class:	N/A
		1 (, ,,						
Run #3b: C	enter Chanr	nel @ 2437 I	MHz - Panel	Antenna					
	al Signal Fie				n 100kHz				
Frequency	Level	Pol		/ 15.247	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters		
		V	-	-	Pk			RB 100 kHz	; VB: 100 kHz
		Н	-	-	Pk			RB 100 kHz	; VB: 100 kHz
Fι	undamental e					dBµV/m			
	Limit for e	emissions ou	Itside of restr	icted bands:	-30.0	dBµV/m	Limit is -30c	Bc (UNII pov	ver measurement)
<u> </u>									
purious E		<u> </u>	45.000	145.047		A			
Frequency	Level	Pol		/ 15.247	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	Deelerser	a
1375.830	49.4	Н	54.0	-4.6	Peak Peak	210 167	1.2 1.3	Peak readin	g w/ average limit
4000 000		11				16/	1.3		
	48.8	V	54.0	-5.2					
		V V	54.0 74.0	-5.2 -23.0	Peak	120	1.3		
4868.330 9745.000	48.8 51.0	V	74.0	-23.0	Peak	120	1.3	the limit was	set 30dB below the
	48.8 51.0	V ns in restricte	74.0 ed bands, the	-23.0 limit of 15.2	Peak 09 was used.	120	1.3	the limit was	set 30dB below the
9745.000	48.8 51.0 For emission level of the f	V ns in restricte undamental	74.0 ed bands, the and measure	-23.0 limit of 15.2 ed in 100kHz	Peak 09 was used.	120 For all othe	1.3 er emissions,	the limit was	set 30dB below the
9745.000 Note 1:	48.8 51.0 For emissior level of the f Signal is not	V ns in restricte undamental in a restricte	74.0 ed bands, the and measure ed band but t	-23.0 limit of 15.2 ed in 100kHz he more strir	Peak 09 was used.	120 For all othe	1.3 er emissions, was used.	the limit was	set 30dB below the
9745.000 Note 1: Note 2:	48.8 51.0 For emissior level of the f Signal is not	V ns in restricte undamental in a restricte	74.0 ed bands, the and measure ed band but t	-23.0 limit of 15.2 ed in 100kHz he more strir	Peak 09 was used. ngent restricte	120 For all othe	1.3 er emissions, was used.	the limit was	set 30dB below the
9745.000 Note 1: Note 2:	48.8 51.0 For emissior level of the f Signal is not	V ns in restricte undamental in a restricte	74.0 ed bands, the and measure ed band but t	-23.0 limit of 15.2 ed in 100kHz he more strir	Peak 09 was used. ngent restricte	120 For all othe	1.3 er emissions, was used.	the limit was	set 30dB below the
9745.000 Note 1: Note 2: Note 3:	48.8 51.0 For emissior level of the f Signal is not No signal wa	V ns in restricte undamental in a restricte	74.0 ed bands, the and measure ed band but t	-23.0 limit of 15.2 ed in 100kHz he more strir	Peak 09 was used. ngent restricte	120 For all othe	1.3 er emissions, was used.	the limit was	set 30dB below the
9745.000 Note 1: Note 2: Note 3:	48.8 51.0 For emissior level of the f Signal is not	V ns in restricte undamental in a restricte	74.0 ed bands, the and measure ed band but t	-23.0 limit of 15.2 ed in 100kHz he more strir	Peak 09 was used. ngent restricte	120 For all othe	1.3 er emissions, was used.	the limit was	set 30dB below the
9745.000 Note 1: Note 2: Note 3:	48.8 51.0 For emissior level of the f Signal is not No signal wa	V ns in restricte undamental in a restricte	74.0 ed bands, the and measure ed band but t	-23.0 limit of 15.2 ed in 100kHz he more strir	Peak 09 was used. ngent restricte	120 For all othe	1.3 er emissions, was used.	the limit was	set 30dB below the
9745.000 Note 1: Note 2: Note 3:	48.8 51.0 For emissior level of the f Signal is not No signal wa	V ns in restricte undamental in a restricte	74.0 ed bands, the and measure ed band but t	-23.0 limit of 15.2 ed in 100kHz he more strir	Peak 09 was used. ngent restricte	120 For all othe	1.3 er emissions, was used.	the limit was	set 30dB below the
9745.000 Note 1: Note 2: Note 3:	48.8 51.0 For emissior level of the f Signal is not No signal wa 80.0 – 70.0 –	V ns in restricte undamental in a restricte	74.0 ed bands, the and measure ed band but t	-23.0 limit of 15.2 ed in 100kHz he more strir	Peak 09 was used. ngent restricte	120 For all othe	1.3 er emissions, was used.	the limit was	set 30dB below the
9745.000 Note 1: Note 2: Note 3:	48.8 51.0 For emissior level of the f Signal is not No signal wa 80.0 – 70.0 –	V ns in restricte undamental in a restricte	74.0 ed bands, the and measure ed band but t	-23.0 limit of 15.2 ed in 100kHz he more strir	Peak 09 was used. ngent restricte	120 For all othe	1.3 er emissions, was used.	the limit was	set 30dB below the
9745.000 Note 1: Note 2: Note 3:	48.8 51.0 For emissior level of the f Signal is not No signal wa 80.0 – 70.0 –	V ns in restricte undamental in a restricte	74.0 ed bands, the and measure ed band but t	-23.0 limit of 15.2 ed in 100kHz he more strir	Peak 09 was used. ngent restricte	120 For all othe	1.3 er emissions, was used.	the limit was	set 30dB below the
9745.000 Note 1: Note 2: Note 3:	48.8 51.0 For emissior level of the f Signal is not No signal wa 80.0 – 70.0 –	V ns in restricte undamental in a restricte	74.0 ed bands, the and measure ed band but t	-23.0 limit of 15.2 ed in 100kHz he more strir	Peak 09 was used. ngent restricte	120 For all othe	1.3 er emissions, was used.	the limit was	set 30dB below the
9745.000 Note 1: Note 2: Note 3:	48.8 51.0 For emissior level of the f Signal is not No signal wa 80.0 – 70.0 –	V ns in restricte undamental in a restricte	74.0 ed bands, the and measure ed band but t	-23.0 limit of 15.2 ed in 100kHz he more strir	Peak 09 was used. ngent restricte	120 For all othe	1.3 er emissions, was used.	the limit was	set 30dB below the
9745.000 Note 1: Note 2: Note 3:	48.8 51.0 For emission level of the f Signal is not No signal wa	V ns in restricte undamental in a restricte	74.0 ed bands, the and measure ed band but t	-23.0 limit of 15.2 ed in 100kHz he more strir	Peak 09 was used. ngent restricte	120 For all othe	1.3 er emissions, was used.	the limit was	set 30dB below the
9745.000 Note 1: Note 2: Note 3:	48.8 51.0 For emissior level of the f Signal is not No signal wa 80.0 - 70.0 - 60.0 - 50.0 - 40.0 -	V ns in restricte undamental in a restricte	74.0 ed bands, the and measure ed band but t	-23.0 limit of 15.2 ed in 100kHz he more strir	Peak 09 was used. ngent restricte	120 For all othe	1.3 er emissions, was used.	the limit was	set 30dB below the
9745.000 Note 1: Note 2: Note 3:	48.8 51.0 For emissior level of the f Signal is not No signal wa 80.0 - 70.0 - 60.0 - 50.0 - 40.0 - 30.0 -	V ns in restricte undamental in a restricte	74.0 ed bands, the and measure ed band but t	-23.0 limit of 15.2 ed in 100kHz he more strir	Peak 09 was used. ngent restricte	120 For all othe	1.3 er emissions, was used.	the limit was	set 30dB below the
9745.000 Note 1: Note 2: Note 3:	48.8 51.0 For emissior level of the f Signal is not No signal wa 80.0 - 70.0 - 60.0 - 50.0 - 40.0 -	V ns in restricte undamental in a restricte	74.0 ed bands, the and measure ed band but t	-23.0 limit of 15.2 ed in 100kHz he more strir	Peak 09 was used. ngent restricte	120 For all othe	1.3 er emissions, was used.	the limit was	set 30dB below the
9745.000 Note 1: Note 2: Note 3:	48.8 51.0 For emissior level of the f Signal is not No signal wa 80.0 - 70.0 - 60.0 - 50.0 - 40.0 - 30.0 - 25.0 -	V ns in restricte undamental in a restricte	74.0 ed bands, the and measure ed band but t	-23.0 limit of 15.2 ed in 100kHz he more strir	Peak 09 was used. ngent restricte	120 For all othe ed band limit or harmonics	1.3 er emissions, was used.	the limit was	

Onorit.	Proxim Corp	oration						Job Number:	J75847
		000.44					T-	Log Number:	T75950
Model:	PROXMB82	802.11abgn	miniPCI mo	dule (3x3)				unt Manager:	
Contact:	Ivaylo Tanko	v						Ŭ	
	FCC Part 15		15.247). RS	S 210				Class:	N/A
		1 (<i>,,</i>						
un #3c: Hi	igh Channel	@ 2462 MH;	z - Panel An	tenna					
	al Signal Fie				n 100kHz				
requency	Level	Pol		/ 15.247	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters		
2461.670	110.5	V	-	-	Pk	346	1.0	RB 100 kHz	; VB: 100 kHz
2467.230	94.6	Н	-	-	Pk	346	1.4	RB 100 kHz	; VB: 100 kHz
					1				
Fι	undamental e					dBµV/m			
	Limit for e	emissions ou	tside of restr	icted bands:	80.5	dBµV/m	Limit is -30	dBc (UNII pov	ver measurement)
purious E		Dal	15 000	/ 15.247	Detector	مان محاج ۸	Llaicht	Comments	
Frequency MHz	Level	Pol V/H			Detector	Azimuth	Height	Comments	
	dBµV/m		Limit 54.0	Margin -5.2	Pk/QP/Avg Peak	degrees 209	meters 1.2	Poak roadin	g w/ average limit
1366 670	100	. u .			геак	209	1.2	r ear reaulh	y w/ average iiiiil
	48.8	H H				256	10		
4923.330	47.0	н Н V	54.0	-7.0	Peak	256 118	1.0 1.0		
4923.330 9845.830 Note 1:	47.0 49.1 For emission level of the f	H V Is in restricte	54.0 74.0 d bands, the and measure	-7.0 -24.9 limit of 15.2 ed in 100kHz	Peak Peak 09 was used.	118 For all othe	1.0 er emissions	, the limit was	set 30dB below the
Note 2:	47.0 49.1 For emissior level of the f Signal is not	H V Is in restricte undamental a in a restricte	54.0 74.0 ed bands, the and measure ed band but t	-7.0 -24.9 Ilimit of 15.2 ed in 100kHz he more strir	Peak Peak 09 was used.	118 For all othe	1.0 er emissions was used.	, the limit was	set 30dB below the
4923.330 9845.830 Note 1: Note 2:	47.0 49.1 For emissior level of the f Signal is not	H V Is in restricte undamental a in a restricte	54.0 74.0 ed bands, the and measure ed band but t	-7.0 -24.9 Ilimit of 15.2 ed in 100kHz he more strir	Peak Peak 09 was used. ngent restricte	118 For all othe	1.0 er emissions was used.	, the limit was	set 30dB below the
4923.330 9845.830 Note 1: Note 2: Note 3:	47.0 49.1 For emissior level of the f Signal is not	H V Is in restricte undamental a in a restricte	54.0 74.0 ed bands, the and measure ed band but t	-7.0 -24.9 Ilimit of 15.2 ed in 100kHz he more strir	Peak Peak 09 was used. ngent restricte	118 For all othe	1.0 er emissions was used.	, the limit was	set 30dB below the
4923.330 9845.830 Note 1: Note 2: Note 3:	47.0 49.1 For emissior level of the f Signal is not No signal wa	H V Is in restricte undamental a in a restricte	54.0 74.0 ed bands, the and measure ed band but t	-7.0 -24.9 Ilimit of 15.2 ed in 100kHz he more strir	Peak Peak 09 was used. ngent restricte	118 For all othe	1.0 er emissions was used.	, the limit was	set 30dB below the
4923.330 9845.830 Note 1: Note 2: Note 3:	47.0 49.1 For emissior level of the f Signal is not No signal wa	H V Is in restricte undamental a in a restricte	54.0 74.0 ed bands, the and measure ed band but t	-7.0 -24.9 Ilimit of 15.2 ed in 100kHz he more strir	Peak Peak 09 was used. ngent restricte	118 For all othe	1.0 er emissions was used.	, the limit was	set 30dB below the
4923.330 9845.830 Note 1: Note 2: Note 3:	47.0 49.1 For emissior level of the f Signal is not No signal wa	H V Is in restricte undamental a in a restricte	54.0 74.0 ed bands, the and measure ed band but t	-7.0 -24.9 Ilimit of 15.2 ed in 100kHz he more strir	Peak Peak 09 was used. ngent restricte	118 For all othe	1.0 er emissions was used.	, the limit was	set 30dB below the
4923.330 9845.830 Note 1: Note 2: Note 3:	47.0 49.1 For emissior level of the f Signal is not No signal wa	H V Is in restricte undamental a in a restricte	54.0 74.0 ed bands, the and measure ed band but t	-7.0 -24.9 Ilimit of 15.2 ed in 100kHz he more strir	Peak Peak 09 was used. ngent restricte	118 For all othe	1.0 er emissions was used.	, the limit was	set 30dB below the
4923.330 9845.830 Note 1: Note 2: Note 3:	47.0 49.1 For emissior level of the f Signal is not No signal wa	H V Is in restricte undamental a in a restricte	54.0 74.0 ed bands, the and measure ed band but t	-7.0 -24.9 Ilimit of 15.2 ed in 100kHz he more strir	Peak Peak 09 was used. ngent restricte	118 For all othe	1.0 er emissions was used.	, the limit was	set 30dB below the
4923.330 9845.830 Note 1: Note 2: Note 3:	47.0 49.1 For emissior level of the f Signal is not No signal wa	H V Is in restricte undamental a in a restricte	54.0 74.0 ed bands, the and measure ed band but t	-7.0 -24.9 Ilimit of 15.2 ed in 100kHz he more strir	Peak Peak 09 was used. ngent restricte	118 For all othe	1.0 er emissions was used.	, the limit was	set 30dB below the
4923.330 9845.830 Note 1: Note 2: Note 3:	47.0 49.1 For emissior level of the f Signal is not No signal wa 80.0 - 70.0 - 50.0 -	H V Is in restricte undamental a in a restricte	54.0 74.0 ed bands, the and measure ed band but t	-7.0 -24.9 Ilimit of 15.2 ed in 100kHz he more strir	Peak Peak 09 was used. ngent restricte	118 For all othe	1.0 er emissions was used.	, the limit was	set 30dB below the
4923.330 9845.830 Note 1: Note 2: Note 3:	47.0 49.1 For emissior level of the f Signal is not No signal wa	H V Is in restricte undamental a in a restricte	54.0 74.0 ed bands, the and measure ed band but t	-7.0 -24.9 Ilimit of 15.2 ed in 100kHz he more strir	Peak Peak 09 was used. ngent restricte	118 For all othe	1.0 er emissions was used.	, the limit was	set 30dB below the
4923.330 9845.830 Note 1: Note 2: Note 3:	47.0 49.1 For emissior level of the f Signal is not No signal wa 80.0 - 70.0 - 50.0 - 50.0 -	H V Is in restricte undamental a in a restricte	54.0 74.0 ed bands, the and measure ed band but t	-7.0 -24.9 Ilimit of 15.2 ed in 100kHz he more strir	Peak Peak 09 was used. ngent restricte	118 For all othe	1.0 er emissions was used.	, the limit was	set 30dB below the
4923.330 9845.830 Note 1: Note 2: Note 3:	47.0 49.1 For emissior level of the f Signal is not No signal wa 80.0 - 70.0 - 50.0 - 50.0 - 40.0 -	H V Is in restricte undamental a in a restricte	54.0 74.0 ed bands, the and measure ed band but t	-7.0 -24.9 Ilimit of 15.2 ed in 100kHz he more strir	Peak Peak 09 was used. ngent restricte	118 For all othe	1.0 er emissions was used.	, the limit was	set 30dB below the
4923.330 9845.830 Note 1: Note 2: Note 3:	47.0 49.1 For emission level of the f Signal is not No signal wa 80.0 - 70.0 - 60.0 - 50.0 - 40.0 - 30.0 -	H V Is in restricte undamental a in a restricte	54.0 74.0 ed bands, the and measure ed band but t	-7.0 -24.9 Ilimit of 15.2 ed in 100kHz he more strir	Peak Peak 09 was used. ngent restricte	118 For all othe	1.0 er emissions was used.	, the limit was	
4923.330 9845.830 Note 1: Note 2: Note 3:	47.0 49.1 For emissior level of the f Signal is not No signal wa 80.0 - 70.0 - 50.0 - 50.0 - 40.0 -	H V Is in restricte undamental a in a restricte	54.0 74.0 ed bands, the and measure ed band but t	-7.0 -24.9 Ilimit of 15.2 ed in 100kHz he more strir	Peak Peak 09 was used. ngent restricte	118 For all othe ed band limit or harmonics	1.0 er emissions was used.	, the limit was	set 30dB below the

Client:	Proxim Corp	oration					Job Number: J75847			
							T-	Log Number:		
Model:	PROXMB82	802.11abgn	miniPCI mo	dule (3x3)				unt Manager:		
Contact:	Ivaylo Tanko	DV V								
Standard:	FCC Part 15	5 Subpart C (15.247), RS	S 210				Class:	N/A	
[Te un #4a: C	Date of Test: est Engineer:	9/2/2009 Mehran Birg nel @ 2437 M	ani /IHz - Panel	Antenna	Con	ode: 802.11 st Location: fig Change:	FT Chambe			
	al Signal Fie			<u>measured in</u> / 15.247		A —iner stle	Llaight	Commente		
requency MHz	Level dBµV/m	Pol V/H	Limit	Margin	Detector Pk/QP/Avg	Azimuth degrees	Height meters	Comments		
111112	αυμν/Π	V	-	-	Pk	0091000	1101010	RB 100 kHz	; VB: 100 kHz	
		H	-	-	Pk				; VB: 100 kHz	
purious E	missions	emissions ou				dBµV/m			ver measurement)	
requency MHz		Pol V/H		/ 15.247	Detector	Azimuth	Height	Comments		
1394.170	dBµV/m 49.0	 H	Limit 54.0	Margin -5.0	Pk/QP/Avg Peak	degrees 211	meters 1.2	Peak readin	g w/ average limit	
3245.830	46.2	V	74.0	-27.8	Peak	346	1.0	1 our roudin		
	43.3	V	54.0	-10.7	Peak	105	1.0			
		ns in restricte	d bands. the	limit of 15.2	09 was used.	For all othe	er emissions	. the limit was	set 30dB below the	
Amplitude (dBuV/m)	For emission level of the f Signal is not	undamental in a restricte	and measure d band but t	ed in 100kHz he more strir		d band limit	was used.	, the limit was	set 30dB below the	

EMC Test Data

	An <u>AZAS</u> company		
Client:	Proxim Corporation	Job Number:	J75847
Model	PROXMB82 802.11abgn miniPCI module (3x3)	T-Log Number:	T75950
wouer.		Account Manager: -	-
Contact:	Ivaylo Tankov		
Standard:	FCC Part 15 Subpart C (15.247), RSS 210	Class:	N/A

RSS 210 and FCC 15.247 (DTS) Antenna Port Measurements MIMO and Smart Antenna Systems - Output Power (5GHz Band)

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 9/3/2009 Test Engineer: Mehran Birgani Test Location: Radio Lab Config. Used: -Config Change: None Host Unit Voltage 120V/60Hz

Summary of Results

Note: All other conducted measurements are covered by the original test report/data as those measurements were made at a power setting equal to, or higher, than those power levels used with the high gain antennas to be covered by this permissive change / reassessment.

Run #	Test Performed	Limit	Pass / Fail	Result / Margin
Sector Antenna (max G	ain of 20dBi)			
1 (802.11a)	Output Power Chain A	15.247(b)	Pass	Power: -0.7 dBm / 0.001 W EIRP: 0.09 W
2 (802.11n HT20)	Output Power Chain A+B+C	15.247(b)	Pass	Power: 3.5 dBm / 0.002 W EIRP: 0.22 W
3 (802.11n HT40)	Output Power Chain A+B+C	15.247(b)	Pass	Power:4.3 dBm / 0.003 W EIRP: 0.271 W
Panel Antenna (Max ga	in of 30dBi)			
1 (802.11a)	Output Power Chain A	15.247(b)	Pass	Power:-0.6 dBm / 0.001 W EIRP: 0.88 W
2 (802.11n HT20)	Output Power Chain A+B+C	15.247(b)	Pass	Power: 2.6 dBm / 0.002 W EIRP: 1.825 W
3 (802.11n HT40)	Output Power Chain A+B+C	15.247(b)	Pass	Power: 4.3 dBm / 0.003 W EIRP: 2.712 W

EMC Test Data

	An Z/ZZ=2 company				
Client:	Proxim Corporation	Job Number:	J75847		
Model: Pl	PROXMB82 802.11abgn miniPCI module (3x3)	T-Log Number: T7595			
MOUEI.	FROAMBOZ 802. Habyn miniFor module (3x3)	Account Manager:	-		
Contact:	Ivaylo Tankov				
Standard:	FCC Part 15 Subpart C (15.247), RSS 210	Class:	N/A		

General Test Configuration

The EUT was connected to the spectrum analyzer or power meter via a suitable attenuator. All measurements were made on each chain separately. Plots are provided for the channel with the highest output power for MIMO modes and for the channels with the highest power for each antenna type for legacy (MISO) modes.

All measurements have been corrected to allow for the external attenuators used.

Ambient Conditions:	Temperature:	20-30 °C
	Rel. Humidity:	32-50 %

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Measurement Notes

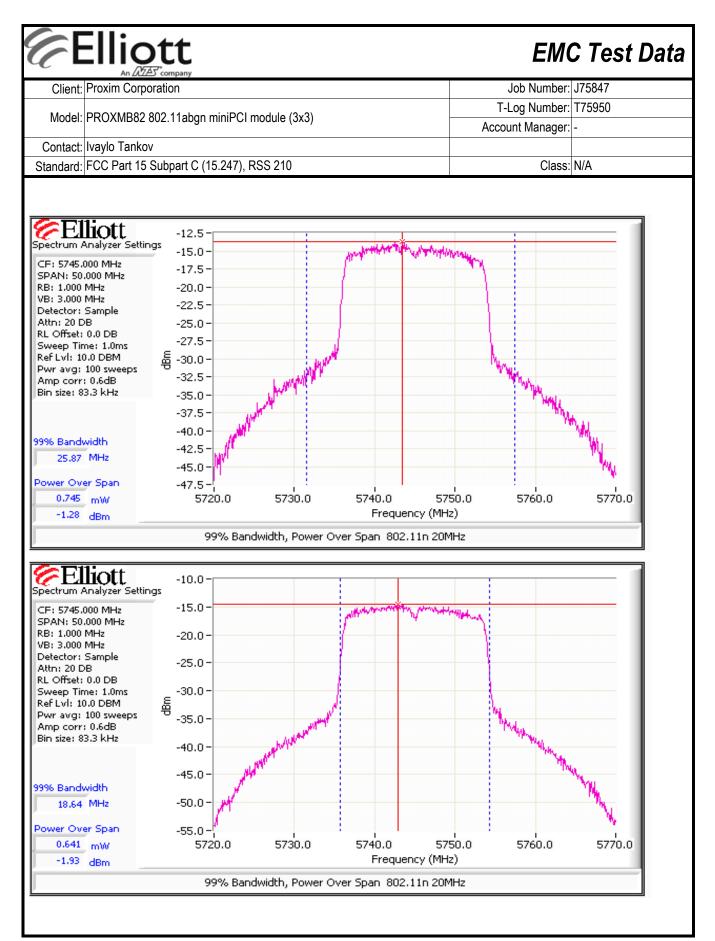
All measurements made with a 20dB or 10dB pad between analyzer and rf port. No correction made for the attenuator as it simulates the cables losses. The pad is also used because the rf control utility for testing cannot set the power below 0dBm so the attenuator adjusts for this fact. The actual drivers used in normal operation can set power below 0dBm.

Note 1:	Output power measured using a spectrum analyzer (see plots below) with RBW=1MHz, VB=3 MHz, sample detector, power averaging on (transmitted signal was continuous) and power integration over 40MHz for 20MHz channel bandwidths and 75MHz for 40MHz channel spacings (reference method 1 of FCC DA 02-2138 for U-NII devices, August 30, 2002). Spurious limit becomes -30dBc.
Note 2:	As there is no coherency between chains in the MIMO modes the total EIRP is the sum of the individual EIRPs and effective antenna gain equals the eirp divide by the sum of the power on each chain. The total power is the sum of the individual chain powers.
Note 3:	Power setting is the software power setting. The attenuator was placed between the rf port and antenna. The maximum power level
Note 4:	The power limit is based on point-point use with the high gain antennas. The power limit is 30dBm minus 1dB for every 3dB the antenna gain exceeds 6dBi.

An ATAS company								
Client: Proxim Corporation					J	lob Number:	J75847	
		dula (2+2)			T-L	og Number:	T75950	
Model: PROXMB82 802.11abg	n minipui mo	dule (3x3)			Accou	nt Manager:	-	
Contact: Ivaylo Tankov								
Standard: FCC Part 15 Subpart C	(15.247), RS	S 210				Class:	N/A	
	()/							
Run #1: Output Power - 802.11a								
Transmitted signal on chain	is coherent ?	N/A						
3								
Power levels for the highest powe	r tested - sec	tor antenna						
Nith 20dBi antenna the maximum or			1	n and for point	t-to-multipoint	the maximu	m is 16dBm.	
5745 MHz	Chain 1	Chain 2	Chain 3	() Chain 4	Total Across	s All Chains	Limi	t
Power Setting (with 20dB Pad) ^{Note 3}	20.5							
Output Power (dBm) Note 1	-0.7				-0.7 dBm	0.001 W	16.0 dBm	0.040 V
Antenna Gain (dBi)	20					20.0 dBi	Pas	s
eirp (dBm) ^{Note 2}	19.33				19.3 dBm	0.086 W	. 40	-
6706 MU				VIIIMURURUR	0		1	
5785 MHz	Chain 1	Chain 2	Chain 3	// <i>6</i> /09660/2///	Total Across	s All Chains	Limi	t
Power Setting (with 20dB Pad) ^{Note 3}	20.5					0.004.144	40.0 15	0.0401
Output Power (dBm) Note 1	-2.0				-2.0 dBm	0.001 W	16.0 dBm	0.040 V
Antenna Gain (dBi) Note 2	20				40.0 dDm	20.0 dBi	Pas	S
eirp (dBm) ^{Note 2}	17.98				18.0 dBm	0.063 W		
5825 MHz	Chain 1	Chain 2	Chain 3	(1),44,44,417	8		1	
Power Setting (with 20dB Pad) ^{Note 3}	20.5	Gridin Z	Chain 5	///CXXEXX/F/////////////////////////////	Total Across	s All Chains	Limi	t
Output Power (dBm)	-2.5				-2.5 dBm	0.001 W	16.0 dBm	0.040 V
Antenna Gain (dBi) Note 2	20				-2.5 ubiii	20.0 dBi		
eirp (dBm) Note 2	17.5				17.5 dBm	0.056 W	Pas	S
								ז
Elliott -12.5	5			I and an attended at				
Spectrum Analyzer Settings -15.0)-		CHANNEL CONTRACT	the state of the s	William			
CF: 5745.000 MHz SPAN: 50.000 MHz -17.5	5-							
RB: 1.000 MHz -20.()-							
VB: 3.000 MHz Detector: Sample -22.5								
Attn: 20 DB								
RL Offset: 0.0 DB -25.0 Sweep Time: 1.0ms -27.0								
Ref Lvl: 10.0 DBM 등 -27.3			all all and a second		Ne.			
Amp corr: 0.6dB		. Lat	1		VEN	Ana I		
Bin size: 83.3 kHz -32.5	5-	1				"MAN		
-35.0)-	N				What		
-37.5	5 M							
oper, providentally	1000						TVIL.	
-40.0	. '						n,	
26.29 MHz	- 1							
26.29 MHz -42.5							11W	
26.29 MHz -40.0 Power Over Span -45.0	o-M	5730.0	5740	.0 57	50.0	5760.0	5770.0	
26.29 MHz -42.5 Power Over Span -45.0 0.857 mW 5		5730.0	5740 Fr	.0 57 equency (MH	'50.0 Iz)	5760.0	۳ % 5770.0	
26.29 MHz -40.0 Power Over Span -45.0) - <mark>1⁰¹⁶ 720.0</mark>		Fr		lz)	5760.0	° ™ 5770.0	

Client: Proxim Corp	Decompany poration					Job Number: J75847			
	000 11 chara		dula (2,2)			T-Log Number: T75950			
Model: PROXMB82	802. Trabgh	miniPCI mo	dule (3x3)			Accou	int Manager:	-	
Contact: Ivaylo Tanko									
Standard: FCC Part 15	Subpart C (15.247), RS	S 210				Class:	N/A	
ower levels for the hig									
/ith 30dBi antenna the r 5745 MHz	naximum out	put power fo Chain 1			and for point	-to-multipoint	t the maximu	m is 6dBm.	
ower Setting (with 20dE	Pad) ^{Note 3}	19.0	Chain 2	Chain 3		Total Acros	s All Chains	Li	nit
utput Power (dBm) ^{Note}	1	-0.6				-0.6 dBm	0.001 W	6.0 dBm	0.004 V
ntenna Gain (dBi) Note 2		30				30.0 dBi	30.0 dBi		ISS
rp (dBm) ^{Note 2}		29.43				29.4 dBm	0.877 W	Γ¢	155
5785 MHz		Chein 1	Chair 0	Cheir 2	<u> </u>	8			
ower Setting (with 20dE	Pad) ^{Note 3}	Chain 1 17.5	Chain 2	Chain 3	())\$\$\$\$\$\$\$\$\$\$ ())\$\$\$\$\$\$\$\$\$ ())\$	Total Acros	s All Chains	Lii	mit
Output Power (dBm) Note	1	-4.3				-4.3 dBm	0.000 W	6.0 dBm	0.004 V
ntenna Gain (dBi) Note 2		30				30.0 dBi	30.0 dBi		iss
irp (dBm) ^{Note 2}		25.67				25.7 dBm	0.369 W	Γč	155
5005 MU-		01.1.4			<u> </u>	9			
5825 MHz ower Setting (with 20dE	Dod)Note 3	Chain 1 20.5	Chain 2	Chain 3	<u>()(C:0810,4)</u>	Total Acros	s All Chains	Li	mit
Output Power (dBm) Note	1 1	-2.5				-2.5 dBm	0.001 W	6.0 dBm	0.004 V
ntenna Gain (dBi) Note 2		30				30.0 dBi	30.0 dBi		
irp (dBm) ^{Note 2}		27.5				27.5 dBm	0.562 W	Pa	ISS
Spectrum Analyzer Setti Spectrum Analyzer Setti SPAN: 50.000 MHz RB: 1.000 MHz Detector: Sample Attn: 20 DB RL Offset: 0.0 DB Sweep Time: 1.0ms Ref Lvl: 10.0 DBM Pwr avg: 100 sweeps Amp corr: 0.6dB Bin size: 83.3 kHz 99% Bandwidth 32.28 MHz Power Over Span	-15.0 -17.5 -20.0 -22.5 -25.0 -27.5 -30.0 -32.5 -35.0 -35.0 -37.5 -40.0 -42.5		F720.0	5740.		50.0	My	5770.0	
0.878 mW -0.57 dBm	5/	20.0	5730.0		o 57 equency (MH		5760.0	5770.0	
		99% Bar	ndwidth, Pov	ver Over Sp	an 802.11a				

An AZ	▲ company								
Client: Proxim Corp							lob Number:	J75847	
	000 11abaa		dula (2×2)			T-L	og Number:	T75950	
Model: PROXMB82	ouz. i iabgn		uule (3X3)			Accou	nt Manager:	-	
Contact: Ivaylo Tanko									
Standard: FCC Part 15	Subpart C (15.247), RSS	S 210				Class:	N/A	
Run #2: Output Power	802.11n H	Т20							
Transmitted signation	al on chain is	s coherent?	No						
Power levels for the hig	•								
With 20dBi antenna the m	naximum out			1	and for point	-to-multipoint	the maximu	m is 16dBm.	
5745 MHz		Chain 1	Chain 2	Chain 3	<u>//C398889/4//</u>	Total Acros	s All Chains	Lir	nit
Power Setting (with 20dB	Pad)		20.5	4.0		0.5.15	0.000.14/	40.0 /D	0.040.14
Output Power (dBm) Note 1		-0.8	-1.3	-1.9		3.5 dBm	0.002 W	16.0 dBm	0.040 W
Antenna Gain (dBi) ^{Note 2}		20	20	20		02.5 dDm	20.0 dBi	Pa	SS
eirp (dBm) Note 2		19.23	18.72	18.07		23.5 dBm	0.222 W		
5785 MHz		Chain 1	Chain 2	Chain 3					
Power Setting (with 20dB		20.5	Ondin O		Total Acros	s All Chains	Lir	nit	
Output Power (dBm)		-2.0	-3.5	-2.3		2.2 dBm	0.002 W	16.0 dBm	0.040 W
Antenna Gain (dBi) Note 2		20	20	20		2.2 0011	20.0 dBi		
eirp (dBm) Note 2		18.03	16.5	17.68		22.2 dBm	0.167 W	Pa	SS
···· þ (··=···)						-			
5825 MHz		Chain 1	Chain 2	Chain 3		Total Agree			-:4
Power Setting (with 20dB	Pad) ^{Note 3}		20.5			I OTAL ACTOS	s All Chains	Limit	
Output Power (dBm) Note 1	,	-2.6	-5.1	-0.2		2.6 dBm	0.002 W	16.0 dBm	0.040 W
Antenna Gain (dBi)		20	20	20			20.0 dBi	Pa	<u></u>
eirp (dBm) ^{Note 2}		17.45	14.88	19.83		22.6 dBm	0.183 W	i a	33
Elliott	-12.5		-		ala di a		1		
Spectrum Analyzer Settir	-15.0	-		LANA MENT	-the runner	Vananth			
CF: 5745.000 MHz SPAN: 50.000 MHz	-17.5	-				- °			
RB: 1.000 MHz	-20.0	-							
VB: 3.000 MHz Detector: Sample	-22.5	_							
Attn: 20 DB	-25.0								
RL Offset: 0.0 DB Sweep Time: 1.0ms									
Ref Lvl: 10.0 DBM Pwr avg: 100 sweeps	ළ ^{-27.5} 원 _{-30.0}			M		We			
Amp corr: 0.6dB	00.0		profil and				W.		
Bin size: 83.3 kHz	-32.5		M				in the		
	-35.0	- AM	NY. 1				THEY		
	-37.5	- John -						My	
99% Bandwidth	-40.0	- Mar						A.	
27,95 MHz	-42.5	- 17						" MA	
Power Over Span	-45.0	_							
0.837 mW		20.0	5730.0	5740.		50.0	5760.0	5770.0	
-0.77 dBm				Fre	equency (MH	z)			
		99% Bandw	idth, Power	Over Span	802.11n 20N	/Hz			
L									

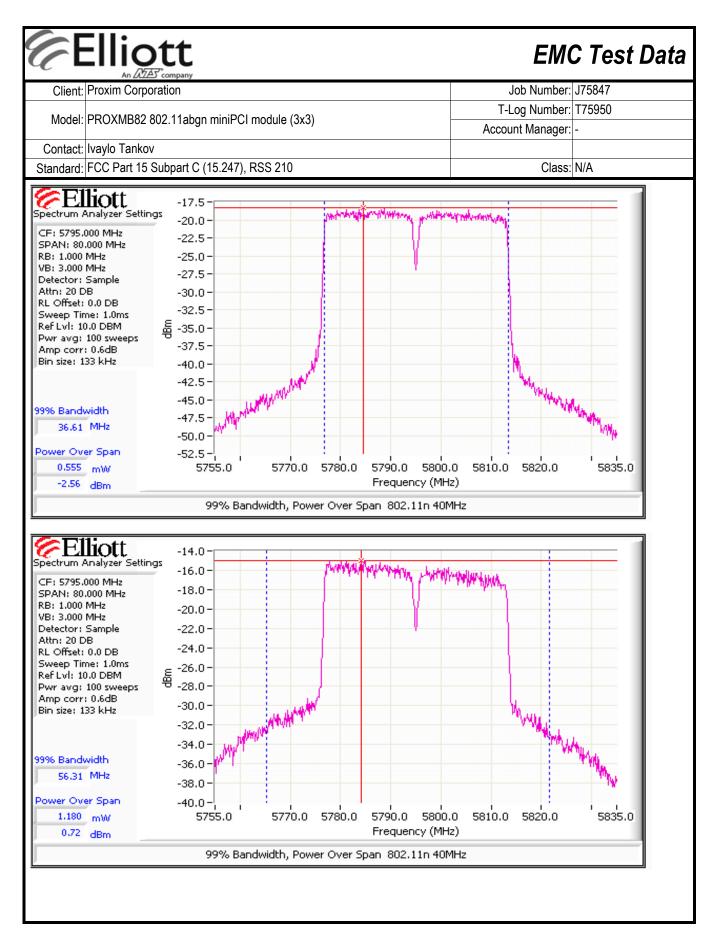


EMC Test Data

An ATAS company								
Client: Proxim Corporation					Job Number: J75847			
		-lula (0.2)			T-I	_og Number:	T75950	
Model: PROXMB82 802.11abg	in miniPCI mo	dule (3x3)			Αссоι	int Manager:	-	
Contact: Ivaylo Tankov								
Standard: FCC Part 15 Subpart C	(15.247), RS		Class: N/A					
Power levels for the highest power With 30dBi antenna the maximum o			int is 30dBm	and for point	t-to-multipoin	t the maximu	m is 6dBm.	
5745 MHz	Chain 1	Chain 2	Chain 3	(Kritedo)/			13	
Power Setting (with 20dB Pad) ^{Note 3}		19.0			Total Across All Chains Limit			mit
Output Power (dBm) ^{Note 1}	-2.4	-3.5	-3.3		1.8 dBm	0.002 W	6.0 dBm	0.004 W
Antenna Gain (dBi) Note 2	30	30	30			30.0 dBi	D	

2.1	0.0	0.0	VIIIIIIIIIIIIII		0.001	0.0 a.z	
30	30	30			30.0 dBi	Da	
27.61	26.55	26.75		31.8 dBm	1.502 W	r ass	
Chain 1	Chain 2	Chain 3	//Chain 4//	Total Across All Chain		Lingit	
	17.5			Total Across All Chains		LII	THL .
-4.5	-6.3	-4.7		-0.3 dBm	0.001 W	6.0 dBm	0.004 W
30	30	30		30.0 dBi		Deep	
25.52	23.66	25.31		29.7 dBm	0.928 W	F d 5 5	
Chain 1	Chain 2	Chain 3		Total Assoc		1.5	
	20.5			I otal Across All Chains		LI	nit
-2.6	-5.1	-0.2		2.6 dBm	0.002 W	6.0 dBm	0.004 W
30	30	30			30.0 dBi	Da	100
27.45	24.88	29.83		32.6 dBm	1.825 W	Pass	
	30 27.61 Chain 1 -4.5 30 25.52 Chain 1 -2.6 30	30 30 27.61 26.55 Chain 1 Chain 2 17.5 -4.5 -4.5 -6.3 30 30 25.52 23.66 Chain 1 Chain 2 20.5 -2.6 -5.1 30 30	30 30 30 27.61 26.55 26.75 Chain 1 Chain 2 Chain 3 17.5 -4.5 -6.3 -4.7 30 30 30 30 25.52 23.66 25.31 Chain 1 Chain 2 Chain 3 20.5 -2.6 -5.1 -0.2 30 30 30 30	30 30 30 27.61 26.55 26.75 Chain 1 Chain 2 Chain 3 17.5 -4.5 -6.3 -4.7 30 30 30 30 25.52 23.66 25.31	30 30 30 30 27.61 26.55 26.75 31.8 dBm Chain 1 Chain 2 Chain 3 Total Across 17.5 -0.3 dBm -0.3 dBm 30 30 30 -0.3 dBm 30 30 30 29.7 dBm Chain 1 Chain 2 Chain 3 Chain 4 Chain 1 Chain 2 Chain 3 Total Across 20.5 -2.6 -5.1 -0.2 2.6 dBm 30 30 30 30 30	30 30 30 30.0 dBi 27.61 26.55 26.75 31.8 dBm 1.502 W Chain 1 Chain 2 Chain 3 Chain 4 Total Across All Chains 17.5 -4.5 -6.3 -4.7 -0.3 dBm 0.001 W 30 30 30 30 30.0 dBi 25.52 23.66 25.31 29.7 dBm 0.928 W Chain 1 Chain 2 Chain 3 Chain 3 Total Across All Chains 20.5 -2.6 -5.1 -0.2 2.6 dBm 0.002 W 30 30 30 30 30.0 dBi 30.0 dBi	30 30 30 30 30.0 dBi Pa 27.61 26.55 26.75 31.8 dBm 1.502 W Pa Chain 1 Chain 2 Chain 3 Chain 4 Total Across All Chains Lir -4.5 -6.3 -4.7 -0.3 dBm 0.001 W 6.0 dBm 30 30 30 30 30.0 dBi Pa 25.52 23.66 25.31 29.7 dBm 0.928 W Pa Chain 1 Chain 2 Chain 3 Chain 4 Chain 3 Eir -2.6 -5.1 -0.2 2.6 dBm 0.002 W 6.0 dBm 30 30 30 30 30.0 dBi Pa

	An ATAS	company								Butu
Client: Proxim							J	lob Number:	J75847	
		0.11		dula (2.2)			T-L	og Number:	T75950	
Model: PROX	VIBOZ OU	iz. i rabgn	miniPCI mo	oule (3x3)			Accou	nt Manager:	-	
Contact: Ivaylo	Tankov									
Standard: FCC Pa	art 15 Si	ubpart C (15.247), RS	S 210				Class:	N/A	
Power levels for th	d signal (ne highe	on chain is e st power	coherent ? tested - sed	ctor antenna		and for point	to multipoint	the maximu	m in 16dPm	
With 20dBi antenna 5755 I		kimum out	Chain 1	Chain 2	Chain 3		0-muilipoini			
				19.0	Unain 5	())CSUEMU 4/)	Total Across	s All Chains	Lim	iit
Output Power (dBm	Power Setting (with 20dB Pad) ^{Note 3}			-2.3	-3.2		2.5 dBm	0.002 W	16.0 dBm	0.040 W
Antenna Gain (dBi)	I) Note 2		-1.5 20	-2.3	-3.2		2.5 0011	20.0 dBi		
eirp (dBm) Note 2			18.51	17.72	16.85		22.5 dBm	0.179 W	Pas	S
			10.01	11.12	10.00			0.173 W		
5795	MHz		Chain 1	Chain 2	Chain 3					
Power Setting (with 20dB Pad) ^{Note 3}				20.5			Total Acros	s All Chains	Lim	iit
Output Power (dBm	Note 1	~~)	-0.1	-2.6	0.7		4.3 dBm	0.003 W	16.0 dBm	0.040 W
Antenna Gain (dBi)	Note 2		20	20	20			20.0 dBi		
eirp (dBm) Note 2			19.9	17.44	20.72		24.3 dBm	0.271 W	Pas	S
SPAN: 80.000 MH RB: 1.000 MHz VB: 3.000 MHz Detector: Sample Attn: 20 DB RL Offset: 0.0 DB Sweep Time: 1.0n Ref Lvl: 10.0 DBM Pwr avg: 100 swe Amp corr: 0.6dB Bin size: 133 kHz	ns	-18.0 -20.0 -22.0 -24.0 -24.0 -28.0 -28.0 -30.0 -30.0 -32.0		humbel		Y	MANANA M	H-Walnum yourney	M.	
60.83 MHz Power Over Span 0.980 mW -0.09 dBm		-36.0 - -38.0 - 57	"		780.0 57	90.0 5800 equency (MH	.0 5810.0		5835.0	
		ç	99% Bandw	idth, Power	Over Span	802.11n 40N	ИHz			1
V										
										_



CElliott						EMO	C Test	Data
Client: Proxim Corporation						lob Number:	J75847	
		dula (2.2)			T-L	og Number:	T75950	
Model: PROXMB82 802.11abg		dule (3x3)			Accou	nt Manager:	-	
Contact: Ivaylo Tankov								
Standard: FCC Part 15 Subpart C	(15.247), RS	S 210				Class:	N/A	
Power levels for the highest powe With 30dBi antenna the maximum ou	it <u>put power fo</u>	r point-to-poi	r	and for poin	t-to-multipoint	the maximu	m is 6dBm.	
5755 MHz	Chain 1	Chain 2	Chain 3		Total Acros	s All Chains	Lir	nit
Power Setting (with 20dB Pad) ^{Note 3}		19.0					L.I.	· · · ·
Output Power (dBm) Note 1	-1.5	-2.3	-3.2		2.5 dBm	0.002 W	6.0 dBm	0.004 W
Antenna Gain (dBi) ^{Note 2}	30	30	30			30.0 dBi	Pa	ISS
eirp (dBm) Note 2	28.51	27.72	26.85		32.5 dBm	1.785 W	r c	155

5795 MHz	Chain 1	Chain 2	Chain 3	(Citatin)4()	Total Acros	s All Chains	Lie	nit
Power Setting (with 20dB Pad) ^{Note 3}		20.5			TULAI ACIUS		LII	1111
Output Power (dBm) Note 1	-0.1	-2.6	0.7		4.3 dBm	0.003 W	6.0 dBm	0.004 W
Antenna Gain (dBi) ^{Note 2}	30	30	30			30.0 dBi	Pa	
eirp (dBm) ^{Note 2}	29.9	27.44	30.72		34.3 dBm	2.712 W	Гđ	55

EMC Test Data

	An 2022 company		
Client:	Proxim Corporation	Job Number:	J75847
Model	PROXMB82 802.11abgn miniPCI module (3x3)	T-Log Number:	T75950
MOUEI.		Account Manager:	-
Contact:	Ivaylo Tankov		
Standard:	FCC Part 15 Subpart C (15.247), RSS 210	Class:	N/A

RSS 210 and FCC 15.247 (DTS) Radiated Spurious Emissions

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing. All remote support equipment was located approximately 30 meters from the EUT with all I/O connections running on top of the groundplane.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions:	Temperature:	15-25 °C
	Rel. Humidity:	25-65 %

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Summary of Results - Device Operating in the 5725 - 5850 MHz Band

Target power is a total of 300mW (approximately 25dBm) peak - approximately 20dBm per chain. Refer to original DTS report. **Sector Antennas**

Run #	Mode	Channel	Attenuator (dB)	Power Setting	Test Performed	Limit	Result / Margin
1a	HT20	Center	20.0	20.5	Radiated Emissions 1 - 40GHz	FCC Part 15.209 / 15.247(c)	49.2dBµV/m @ 1390.0MHz (-4.8dB)
1b	802.11a	Center	20.0	20.5	Radiated Emissions 1 - 40GHz	FCC Part 15.209 / 15.247(c)	48.7dBµV/m @ 11575.0MHz (-5.3dB)
1c	worst case	Low	20.0	20.5	Radiated Emissions 1 - 40GHz	FCC Part 15.209 / 15.247(c)	48.7dBµV/m @ 1410.0MHz (-5.3dB)
1d	from 1a and 1b	High	20.0	20.5	Radiated Emissions 1 - 40GHz	FCC Part 15.209 / 15.247(c)	49.0dBµV/m @ 1390.0MHz (-5.0dB)
Panel Ante	nnas						
2a	worst case	Center	20.0	17.5	Radiated Emissions 1 - 40GHz	FCC Part 15.209 / 15.247(c)	53.7dBµV/m @ 7713.3MHz (-0.3dB)
2b	from 1a	Low	20.0	19.0	Radiated Emissions 1 - 40GHz	FCC Part 15.209 / 15.247(c)	49.9dBµV/m @ 11490.0MHz (-4.1dB)
2c	and 1b	High	20.0	20.5	Radiated Emissions 1 - 40GHz	FCC Part 15.209 / 15.247(c)	52.9dBµV/m @ 5087.7MHz (-1.1dB)

		Al company							C Test Dat
Client:	Proxim Corp	oration						Job Number:	
Model:	PROXMB82	802.11abon	miniPCI mo	dule (3x3)				Log Number:	
							Acco	unt Manager:	-
	Ivaylo Tanko								
Standard:	FCC Part 15	Subpart C (15.247), RSS	5 210				Class:	N/A
Run #1: Ra	diated Spur	ious Emissi	ons, 1000 - 4	40,000 MHz,	, Sector Ante	enna			
	Date of Test:				Te	est Location:	FT Chambe	er #3	
Te	st Engineer:	Mehran Birg	ani						
un #1a: H	T20 Mode, 5	785 MHz							
undament	al Signal Fie								
requency	Level	Pol		15.247	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	<u>V/H</u>	Limit	Margin	Pk/QP/Avg	degrees	meters		00111
5783.800	103.2	<u> </u>	-	-	-	352	1.1	RB = VB = 1	
5782.600	93.9	Н	-	-	-	46	1.0	RB = VB = 1	00kHz
Fu	undamental e	mission leve	l @ 3m in 10	0kHz RBW:	103.2	dBµV/m			
			tside of restr			dBµV/m	Limit is -300	dBc (UNII pov	ver measurement)
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ourious E		Del	15 200	/ 15.247	Detector	۸ – نوم بر ا له	Llaiabt	Commonto	
requency MHz	Level	Pol V/H		1	Detector	Azimuth	Height	Comments	
713.380	dBµV/m 48.2	<u>v/n</u> V	Limit 54.0	Margin -5.8	Pk/QP/Avg AVG	degrees 144	meters 1.0		
1568.660	40.2	V	54.0 54.0	-5.0	AVG	66	1.0		
390.000	49.2	v	54.0 54.0	-0.0 - 4.8	Peak	75	1.7	Peak readin	g w/ average limit
850.000	49.2	H	54.0	-4.8	Peak	34	1.0		
713.480	52.7	V	74.0	-21.3	PK	144	1.0		
1569.320	58.9	V	74.0	-15.1	PK	66	1.7		
	For emission level of the f					For all othe	er emissions.	, the limit was	set 30dB below the
					 ngent restricte	d hand limit	was used		
	No signal wa				ngent restricte		was useu.		
	NO SIGNAL WE								
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7	0.0-								
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36	0.0-								
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3	0.0 1					r			
	5.0- 1000				, Frequency				10000 12000

Model: P Contact: Iv Standard: F Run #1b: 802 Fundamental Frequency	vaylo Tanko CC Part 15 2.11a Mode	802.11abgn / Subpart C (miniPCI mod				T-l	Job Number: Log Number: unt Manager:	T75950 -
Contact: Iv Standard: F Run #1b: 802 Fundamental Frequency MHz	vaylo Tanko CC Part 15 2.11a Mode I Signal Fiel	/ Subpart C (unt Manager:	-
Contact: Iv Standard: F Run #1b: 802 Fundamental Frequency MHz	vaylo Tanko CC Part 15 2.11a Mode I Signal Fiel	/ Subpart C (Αссоι		
Standard: F Run #1b: 802 Fundamental Frequency MHz	CC Part 15 2.11a Mode I Signal Fiel	Subpart C (15.247), RSS	5 210					
Standard: F Run #1b: 802 Fundamental Frequency MHz	CC Part 15 2.11a Mode I Signal Fiel	Subpart C (15.247), RSS	S 210					
Run #1b: 802 Fundamental Frequency MHz	2.11a Mode I Signal Fie		10.211), 100	5210				Class.	N/A
Fundamental Frequency MHz	l Signal Fiel	, 5785 MHz						01000.	
Fundamental Frequency MHz	l Signal Fiel								
Frequency MHz		d Strongth	· Dook voluo	mossured in	100kHz				
MHz		Pol		15.247	Detector	Azimuth	Height	Comments	
	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	Comments	
	99.4	V	-	-		360	1.4	RB = VB = 1	00kHz
5778.800	84.0	H	-	-	_	349	1.4	RB = VB = 1	
5110.000	04.0	11	_	_	_	040	1.0		
Fun	idamental er	nission leve	l @ 3m in 10	0kHz RBW:	99.4	dBµV/m			
			tside of restri				Limit is -30d	IBc (UNII pov	ver measurement)
					••••				
Spurious Em	issions								
Frequency	Level	Pol	15.209	/ 15.247	Detector	Azimuth	Height	Comments	
	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters		
1410.000	48.2	V	54.0	-5.8	Peak	76	1.8		
7716.670	47.2	V	54.0	-6.8	Peak	148	1.0		
11575.000	48.7	٧	54.0	-5.3	Peak	292	1.8	Peak readin	g w/ average limit
						For all othe	r emissions,	the limit was	set 30dB below the
Note 1: le	evel of the fu	ndamental a	and measure	d in 100kHz					
Note 2: S	Signal is not	n a restricte	ed band but t	he more strir	ngent restricte	ed band limit	was used.		
Note 3: N	lo signal wa	s found abo	uve 12GHz.						
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					Frequency	(MHz)			10000 12000

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Client:	Proxim Corp	oration						Job Number:	J75847
M		000 44 1					T-I	_og Number:	T75950
Model:	PROXMB82	802.11abgn	miniPCI mo	dule (3x3)			Accou	unt Manager:	_
Contact	Ivaylo Tanko	v							
	FCC Part 15		15 0/7) DO	2 210				Class:	NI/A
Standard.	FUC Fait 15	Subpart C (15.24 <i>1)</i> , Not	5210				01855.	IN/A
	T20 Mode, 5								
	al Signal Fie								
requency	Level	Pol		/ 15.247	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters		
5747.300	100.7	V	-	-	-	350	1.1	RB = VB = 1	
5740.700	91.6	Н	-	-	-	46	1.0	RB = VB = 1	00kHz
							-		
Fu	indamental e					dBµV/m			
	Limit for e	emissions ou	tside of restr	icted bands:	70.7	dBµV/m	Limit is -30d	IBc (UNII pov	ver measurement)
purious Er	missions								
requency	Level	Pol	15.209	/ 15.247	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters		
1493.080	46.1	V	54.0	-7.9	AVG	306	1.4		
1410.000	48.7	V	54.0	-5.3	Peak	285	1.3	Peak readin	g w/ average limit
1501.580	59.8	V	74.0	-14.2	PK	306	1.4		
1.4				limit of 15 2	hagu gaw 00	For all othe	r omissions	the limit was	set 30dR helow the
ote 1:		undamental				For all othe	er emissions,	the limit was	set 30dB below the
	level of the f	undamental	and measure	ed in 100kHz				the limit was	set 30dB below the
	level of the f	undamental	and measure	ed in 100kHz				the limit was	set 30dB below the
	level of the f	undamental	and measure	ed in 100kHz				the limit was	set 30dB below the
lote 2:	level of the f Signal is not	undamental	and measure	ed in 100kHz				the limit was	set 30dB below the
lote 2:	level of the f	undamental	and measure	ed in 100kHz				the limit was	set 30dB below the
lote 2:	level of the f Signal is not	undamental	and measure	ed in 100kHz				the limit was	set 30dB below the
lote 2:	level of the f Signal is not	undamental	and measure	ed in 100kHz				the limit was	set 30dB below the
ote 2:	level of the f Signal is not 30.0 - 70.0 -	undamental	and measure	ed in 100kHz				the limit was	set 30dB below the
ote 2:	level of the f Signal is not	undamental	and measure	ed in 100kHz				the limit was	set 30dB below the
ote 2:	level of the f Signal is not 30.0 - 70.0 - 50.0 -	undamental	and measure	ed in 100kHz				the limit was	set 30dB below the
ote 2:	level of the f Signal is not 30.0 - 70.0 - 50.0 -	undamental	and measure	ed in 100kHz			was used.	the limit was	set 30dB below the
lote 2:	level of the f Signal is not 30.0 - 70.0 - 50.0 -	undamental	and measure	ed in 100kHz				the limit was	set 30dB below the
ote 2:	level of the f Signal is not 30.0 - 70.0 -	undamental	and measure	ed in 100kHz			was used.	the limit was	set 30dB below the
Amplitude (dBuV/m)	level of the f Signal is not 30.0 - 70.0 - 50.0 - 50.0 -	undamental	and measure	ed in 100kHz			was used.	the limit was	set 30dB below the
ote 2:	level of the f Signal is not 30.0 - 70.0 - 50.0 - 50.0 - 40.0 -	undamental	and measure	ed in 100kHz			was used.	the limit was	set 30dB below the
ote 2:	level of the f Signal is not 30.0 - 70.0 - 50.0 - 50.0 - 40.0 - 30.0 - 25.0 -	undamental	and measure	ed in 100kHz			was used.	the limit was	
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Vote 2:	level of the f Signal is not 30.0 - 70.0 - 50.0 - 50.0 - 40.0 - 30.0 - 25.0 -	undamental	and measure	ed in 100kHz			was used.	the limit was	
Iote 2:	level of the f Signal is not 30.0 - 70.0 - 50.0 - 50.0 - 40.0 - 30.0 - 25.0 -	undamental	and measure	ed in 100kHz	Ingent restricte		was used.	the limit was	
Iote 2:	level of the f Signal is not 30.0 - 70.0 - 50.0 - 50.0 - 40.0 - 30.0 - 25.0 -	undamental	and measure	ed in 100kHz	Ingent restricte		was used.	the limit was	
ote 2:	level of the f Signal is not 30.0 - 70.0 - 50.0 - 50.0 - 40.0 - 30.0 - 25.0 -	undamental	and measure	ed in 100kHz	Ingent restricte		was used.	the limit was	
ote 2:	level of the f Signal is not 30.0 - 70.0 - 50.0 - 50.0 - 40.0 - 30.0 - 25.0 -	undamental	and measure	ed in 100kHz	Ingent restricte		was used.	the limit was	
ote 2:	level of the f Signal is not 30.0 - 70.0 - 50.0 - 50.0 - 40.0 - 30.0 - 25.0 -	undamental	and measure	ed in 100kHz	Ingent restricte		was used.	the limit was	
ote 2:	level of the f Signal is not 30.0 - 70.0 - 50.0 - 50.0 - 40.0 - 30.0 - 25.0 -	undamental	and measure	ed in 100kHz	Ingent restricte		was used.	the limit was	

Client: Proxim Corporation Job Number: J75847 Model: PROXMB82 802.11abgn miniPCI module (3x3) T-Log Number: T75950 Contact: Ivaylo Tankov		An ZA2	Company								
Model: PROXMB82 802.11 abgn miniPCI module (3x3) Account Manager: - Contact: Ivaylo Tankov Standard: FCC Part 15 Subpart C (15.247), RSS 210 Class: N/A Run #1d: H20 Mode, 5825 MHz Fundamental Signal Field Strength: Peak value measured in 100kHz Frequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters 5830.170 104.5 V - - 352 1.1 RB = VB = 100kHz 5828.230 91.5 H - - 46 1.0 RB = VB = 100kHz Stringth Fundamental emissions outside of restricted bands: 74.5 dBµV/m Limit is -30dBc (UNII power measureme Spirious Emissions Frequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµV/m Limit for emissions outside of restricted bands: 74.5 dBµV/m Limit is -30dBc (UNII power measureme 11645.600	Client:	Proxim Corp	oration						Job Number:	J75847	
Account Manager: Contact: Ivaylo Tankov Standard: FCC Part 15 Subpart C (15.247), RSS 210 Run #1d: H20 Mode, 5825 MHz Frequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters 5830.170 104.5 V - 5828.230 91.5 H - Evide Pol Todamental emission level @ 3m in 100kHz RBW 104.5 dBµV/m Limit for emissions outside of restricted bands: 74.5 dBµV/m Limit for emissions Frequency Frequency Level Pol 152.09 / 15.247 Detector MHz dBµV/m I1645.600 43.8 V 54.0 -10.2 AVG 11647.130 56.8 V 70.0 74.5	N.A		000 44 1		dula (0-0)			T-l	Log Number:	T75950	
Contact: Ivaylo Tankov Standard: FCC Part 15 Subpart C (15.247), RSS 210 Class: N/A Run #1d: H20 Mode, 5825 MHz Fundamental Signal Field Strength: Peak value measured in 100kHz Frequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters 530.170 104.5 V - - 46 1.0 RB = VB = 100kHz 5830.170 104.5 V - - 46 1.0 RB = VB = 100kHz Fundamental emission level @ 3m in 100kHz RBW: 104.5 dBµV/m Limit is -30dBc (UNII power measureme Spurious Emissions Frequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµV/m VH Limit Margin Pk/QP/Avg degrees meters 11645.600 43.8 V 54.0 -10.2 AVG <td>Model:</td> <td>PROXMB82</td> <td>802.11abgn</td> <td>miniPCI mod</td> <td>aule (3x3)</td> <td></td> <td></td> <td>Αςςοι</td> <td>unt Manager:</td> <td>-</td>	Model:	PROXMB82	802.11abgn	miniPCI mod	aule (3x3)			Αςςοι	unt Manager:	-	
Standard: FCC Part 15 Subpart C (15.247), RSS 210 Class: N/A Run #1d: H20 Mode, 5825 MHz Frequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµ//m V/H Limit Margin PK/QP/Avg degrees meters Standard 5830.170 104.5 V - - 352 1.1 RB = VB = 100kHz 5828.230 91.5 H - - 46 1.0 RB = VB = 100kHz 5828.230 91.5 H - - - 46 1.0 RB = VB = 100kHz Frequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin PK/QP/Avg degrees meters 11645.600 43.8 V 54.0 -10.2 AVG 73 1.2 Pak reading w/ average lin 1309.000 49.0 H 54.0 -15.8 Peak <	Contact:	Ivaylo Tanko	DV V						<u> </u>		
Run #1d: H20 Mode, 5825 MHz Frequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments 5830.170 104.5 V - - 352 1.1 RB = VB = 100kHz 5828.230 91.5 H - - 46 1.0 RB = VB = 100kHz 5828.230 91.5 H - - 46 1.0 RB = VB = 100kHz 5828.230 91.5 H - - 46 1.0 RB = VB = 100kHz Fundamental emission level @ 3m in 100kHz RBW 104.5 dBµV/m Limit is -30dBc (UNII power measureme Spurious Emissions Frequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters 1.1 2 1.2 1390.000 43.8 V 54.0 -5.0 Peak 51 1.2 Peak reading w/ average lir 1766.670				15.247). RSS	S 210				Class:	N/A	
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MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters 5830.170 104.5 V - - 352 1.1 RB = VB = 100kHz 5828.230 91.5 H - - 46 1.0 RB = VB = 100kHz Fundamental emission level @ 3m in 100kHz RBW: 104.5 dBµV/m Limit is -30dBc (UNII power measureme Spurious Emissions Frequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters 11645.600 43.8 V 54.0 -10.2 AVG 73 1.2 1390.000 49.0 H 54.0 -50 Peak 51 1.2 Peak reading w/ average lin 7766.670 58.7 V 74.5 -15.8 Peak 51 1.2 Peak 102 1.2 Intervisions in restricted bands, the limit of 15.209 was used. For all other emissio							Azimuth	Height	Comments		
5830.170 104.5 V - - 352 1.1 RB = VB = 100kHz 5828.230 91.5 H - - 46 1.0 RB = VB = 100kHz Fundamental emission level @ 3m in 100kHz RBW: 104.5 dBµV/m Limit for emissions outside of restricted bands: 74.5 dBµV/m Limit for emissions outside of restricted bands: 74.5 dBµV/m Limit is -30dBc (UNII power measureme Spurious Emissions Frequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters 11645.600 43.8 V 54.0 -10.2 AVG 73 1.2 1390.000 49.0 H 54.0 -5.0 Peak 51 1.2 Peak reading w/ average lin 7766.670 58.7 V 74.5 -15.8 Peak 144 1.0 Not in restricted band 11647.130 56.8 V 74.0 -17.2 PK 73 1.2 <td colscolscolscolscolscolscolscolscolscols<="" td=""><td></td><td></td><td></td><td>Limit</td><td>Margin</td><td></td><td></td><td></td><td></td><td></td></td>	<td></td> <td></td> <td></td> <td>Limit</td> <td>Margin</td> <td></td> <td></td> <td></td> <td></td> <td></td>				Limit	Margin					
Fundamental emission level @ 3m in 100kHz RBW: 104.5 dBµV/m Limit for emissions outside of restricted bands: 74.5 dBµV/m Limit for emissions Spurious Emissions Frequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters 11645.600 43.8 V 54.0 -10.2 AVG 73 1.2 1390.000 49.0 H 54.0 -50. Peak 51 1.2 Peak reading w/ average lir 7766.670 58.7 V 74.5 -15.8 Peak 144 1.0 Not in restricted band 11647.130 56.8 V 74.0 -17.2 PK 73 1.2 Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below level of the fundamental and measured in 100kHz. Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used. Image: stringent dater of the fundamental and measured in 100kHz. Mat	5830.170		V	-	-	-		1.1	RB = VB = 1	00kHz	
Limit for emissions outside of restricted bands: 74.5 dBµV/m Limit is -30dBc (UNII power measureme Spurious Emissions Frequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters	5828.230	91.5	Н	-	-	-	46	1.0	RB = VB = 1	00kHz	
Limit for emissions outside of restricted bands: 74.5 dBµV/m Limit is -30dBc (UNII power measureme Spurious Emissions Prequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters									-		
Spurious Emissions Frequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters 11645.600 43.8 V 54.0 -10.2 AVG 73 1.2 1390.000 49.0 H 54.0 -50 Peak 51 1.2 Peak reading w/ average lin 7766.670 58.7 V 74.5 -15.8 Peak 144 1.0 Not in restricted band 11647.130 56.8 V 74.0 -17.2 PK 73 1.2 Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB belov level of the fundamental and measured in 100kHz. Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used. Mote 2: Signal is not in a restricted band but the more stringent restricted band limit was used. Mote 0 0 0 0 0 0 0 0 0 0 0 0 0	Fi					104.5	dBµV/m				
Frequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters 11645.600 43.8 V 54.0 -10.2 AVG 73 1.2 1390.000 49.0 H 54.0 -5.0 Peak 51 1.2 Peak reading w/ average lir 7766.670 58.7 V 74.5 -15.8 Peak 144 1.0 Not in restricted band 11647.130 56.8 V 74.0 -17.2 PK 73 1.2 Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below level of the fundamental and measured in 100kHz. Signal is not in a restricted band but the more stringent restricted band limit was used. Signal is not in a restricted band but the more stringent restricted band limit was used. Mug for 0.0 90 90 90.0 90 90 90 90 90 90 90 90 90 90 <t< td=""><td></td><td>Limit for e</td><td>emissions ou</td><td>tside of restri</td><td>icted bands:</td><td>74.5</td><td>dBµV/m</td><td>Limit is -30d</td><td>IBc (UNII pov</td><td>ver measurement)</td></t<>		Limit for e	emissions ou	tside of restri	icted bands:	74.5	dBµV/m	Limit is -30d	IBc (UNII pov	ver measurement)	
Frequency Level Pol 15.209 / 15.247 Detector Azimuth Height Comments MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters 11645.600 43.8 V 54.0 -10.2 AVG 73 1.2 1390.000 49.0 H 54.0 -5.0 Peak 51 1.2 Peak reading w/ average lir 7766.670 58.7 V 74.5 -15.8 Peak 144 1.0 Not in restricted band 11647.130 56.8 V 74.0 -17.2 PK 73 1.2 Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below level of the fundamental and measured in 100kHz. Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used. 100 0											
MHz dBµV/m V/H Limit Margin Pk/QP/Avg degrees meters 11645.600 43.8 V 54.0 -10.2 AVG 73 1.2 1390.000 49.0 H 54.0 -5.0 Peak 51 1.2 Peak reading w/ average lin 7766.670 58.7 V 74.5 -15.8 Peak 144 1.0 Not in restricted band 11647.130 56.8 V 74.0 -17.2 PK 73 1.2 Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below level of the fundamental and measured in 100kHz. Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used. Output 9 50.0 -						^			-		
11645.600 43.8 V 54.0 -10.2 AVG 73 1.2 1390.000 49.0 H 54.0 -5.0 Peak 51 1.2 Peak reading w/ average lin 7766.670 58.7 V 74.5 -15.8 Peak 144 1.0 Not in restricted band 11647.130 56.8 V 74.0 -17.2 PK 73 1.2 Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below Isote 1: Isote of the fundamental and measured in 100kHz. Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used. 60.0 -									Comments		
1390.000 49.0 H 54.0 -5.0 Peak 51 1.2 Peak reading w/ average lin 7766.670 58.7 V 74.5 -15.8 Peak 144 1.0 Not in restricted band 11647.130 56.8 V 74.0 -17.2 PK 73 1.2 Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below level of the fundamental and measured in 100kHz. Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used. 80.0 -						, in the second se	-				
7766.670 58.7 V 74.5 -15.8 Peak 144 1.0 Not in restricted band 11647.130 56.8 V 74.0 -17.2 PK 73 1.2 Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below level of the fundamental and measured in 100kHz. Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used. Signal is not in a restricted band but the more stringent restricted band limit was used. 0.0 -0.0<									Dealers		
11647.130 56.8 V 74.0 -17.2 PK 73 1.2 Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below level of the fundamental and measured in 100kHz. Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used. 80.0 - 70.0 - 90 - 90 - 90 - 91 - 92 - 93 - 94 - 95 - 90 - 91 - 92 - 93 - 94 - 94 - 95 - 91 - 92 - 93 - 94 - 95 - 96 - 97 - 98 - 99 - 90 - 90 </td <td></td>											
Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below level of the fundamental and measured in 100kHz. Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.									INOL IN PESTIC		
Note 1: level of the fundamental and measured in 100kHz. Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.	11047.130	0.00	V	74.0	-17.Z	PK	73	I.Z			
25.0-	Amplitude (dBuV/m)	80.0 - 70.0 - 60.0 - 50.0 - 40.0 -					lange of				
1000 1000 120						_	· · · · ·			10000 12000	
Frequency (MHz)						Frequency	(MHz)				

Client	Proxim Corp	A company						Job Number:	C Test Dat
Cilent.		oration						Log Number:	
Model:	PROXMB82	802.11abgn	n miniPCI mo	dule (3x3)				-	
<u> </u>	I. I. T. I.						Acco	unt Manager:	-
	Ivaylo Tanko							0	
Standard:	FUC Part 15	Subpart C ((15.247), RSS	5210				Class:	N/A
un #2: Ra	diated Spuri	ious Emissi	ons, 1000 - 4	40,000 MHz,	, Panel Anter	nna			
	Date of Test:				Te	est Location:	FT Chambe	er #5	
Te	st Engineer:	Rafael Vare	las						
	T20 Mode, 5			magguradi					
requency	Level	Pol	: Peak value 15.209	/ 15.247	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	Serminorito	
5786.400	109.1	V	-	-	PK	346	1.1	RB 100 kHz	; VB: 100 kHz
5788.300	94.9	H	-	-	PK	258	1.4		VB: 100 kHz
								-	
Fu			el @ 3m in 10			dBµV/m			0
	Limit for e	missions ou	itside of restr	icted bands:	79.1	dBµV/m	Limit is -300	dBc (UNII pov	ver measurement)
ourious Ei	missions								
requency	Level	Pol	15.209	/ 15.247	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters		
713.330	53.7	V	54.0	-0.3	AVG	143	1.3		
713.400	58.2	V	74.0	-15.8	PK	143	1.3		
5076.900	49.8	V	54.0	-4.2	AVG	4	1.1		
5079.370	62.3	V	74.0	-11.7	PK	4	1.1		
3856.690	45.5	V	54.0	-8.5	AVG	219	1.0		
1391.170	38.3	V	54.0	-15.7	AVG	227	1.1		
1389.560	56.4	V	74.0	-17.6	PK	227	1.1		
1573.420	49.3	V	54.0	-4.7	AVG	259	1.0		
1575.150	60.0	V	74.0	-14.0	PK	259	1.0		
1.4	For emission	s in restricte	ed bands, the	limit of 15.2	09 was used.	For all othe	r emissions	, the limit was	set 30dB below the
ote 1:	level of the f	undamental	and measure	d in 100kHz					
ote 2:	Signal is not	in a restricte	ed band but t	ne more strir	ngent restricte	ed band limit	was used.		
80	0.0								
		·····				·····			
	0.0-		11						
- Ę.,		11 1		1011 1	1 11 1		11		
990	0.0-								
	0.0-					• •			L.
<u>i</u> ë ``	hh. 11.	АлАнк	1			. M	" W1	يعد الجر	m ~~ ~
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40			1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1						
Amplitude (dBuV/m) After (dBuV/m)									
30	0.0-								
30	0.0 - 5.0 -, 1000								10000 12000

5	An A	A company							
Client:	Proxim Corp							Job Number:	J75847
M. L.I		000 44 1					T-l	_og Number:	T75950
Wodel:	PROXIMB82	802.11abgn	miniPCI mo	dule (3x3)			Αςςοι	unt Manager:	-
Contact:	Ivaylo Tanko	DV V							
Standard:	FCC Part 15	Subpart C (15.247), RSS	S 210				Class:	N/A
		1 \	,,						
Run #2b: H	T20 Mode, st	5745 MHz							
		eld Strength	: Peak value	measured ir	n 100kHz				
Frequency	Level	Pol		/ 15.247	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters		
5749.000	107.1	V	-	-	-	0	1.1		;; VB: 100 kHz
5747.100	87.5	Н	-	-	-	33	1.0	RB 100 kHz	;; VB: 100 kHz
Fi	Indamental e	mission leve	l @ 3m in 10	0kHz RBW:	107.1	dBµV/m			
		emissions ou				dBµV/m	Limit is -30d	Bc (UNII pov	ver measurement)
						abpatim			
Spurious E			15 000	145 047	Detector	A	11-2-1-0	0	
Frequency	Level	Pol		/ 15.247	Detector	Azimuth	Height	Comments	
MHz 1375.830	dBµV/m 44.4	V/H V	Limit 54.0	Margin -9.6	Pk/QP/Avg Peak	degrees 89	meters 1.6		
5033.330	44.4	V	54.0 54.0	-9.0	Peak	<u> </u>	1.0		
7660.830	49.0	V	54.0	-7.9	Peak	100	1.0		
11490.000	40 .1	V	54.0 54.0	-7.5 -4.1	Peak	159	1.0	Peak readin	g w/ average limit
11400.000									
Note 1:						For all othe	er emissions,	the limit was	set 30dB below the
		undamental							
Note 2:					ngent restricte				
Note 3:	Power was r	reduced but t	he emission	did not get a	ny lower. It a	appears that	the emission	is radiating	from the board.
(m)/i	80.0 - 70.0 - 60.0 - 50.0 - 40.0 - 30.0 - 25.0 - 1000		 Mw1w1pvu.jM		Frequency	/ (MHz)			10000 12000

	An LAZ	A company							
Client:	Proxim Corp	oration						Job Number:	J75847
		000 44					T-I	Log Number:	T75950
Model:	PROXMB82	802.11abgn	miniPCI mo	aule (3x3)				unt Manager:	
Contact:	Ivaylo Tanko	DV						<u> </u>	
	FCC Part 15		15.247) RSS	5 210				Class:	N/A
otandara.			10.211), 1101	5210				01400.	
Qun #2c∙ ⊨	IT20 Mode, 5	5825 MHz							
	tal Signal Fie		• Peak value	measured in	100kHz				
Frequency	Level	Pol		/ 15.247	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters	o on monto	
5825.700	105.9	V	-	-	PK	338	1.0	RB 100 kHz	VB: 100 kHz
5824.430	93.8	H	-	-	PK	41	1.0		VB: 100 kHz
					405.0	ID 14	1		
Fl	undamental e					dBµV/m			1)
	Limit tor (emissions ou	tside of restr	iclea panas:	/5.9	dBµV/m	j∟imit is -300	IRC (UNII bow	er measurement)
Spurious E	missions								
Frequency	1	Pol	15.209	/ 15.247	Detector	Azimuth	Height	Comments	
MHz	dBµV/m	V/H	Limit	Margin	Pk/QP/Avg	degrees	meters		
1413.990	37.4	Н	54.0	-16.6	AVG	126	1.0		
3883.330	44.2	Н	54.0	-9.8	AVG	335	1.0		
5087.730	52.9	V	54.0	-1.1	AVG	346	1.1		
11653.810	52.6	V	54.0	-1.4	AVG	318	1.7		
7766.390	56.2	V	74.0	-17.8	Peak	124	1.6		
1415.150	58.6	Н	74.0	-15.4	PK	126	1.0		
3883.440	51.2	Н	74.0	-22.8	PK	335	1.0		
5089.490	64.4	V	74.0	-9.6	PK	346	1.1	ļ	
11652.840	65.2	V	74.0	-8.8	PK	318	1.7		
			d bonda 4	limit of 45 O	00		n omia-lar-	the line:tour-	aat 20dD balaw the
Note 1:			ed bands, the			For all othe	ernissions,	the limit was	set 30dB below the
lote 2:					Igent restricte	d hand limit	waa uaad		
NOLE Z.	Signal is not				igent restricte		was used.		
80.	0						- 11		
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(m/v001) 2011 (dBuv/m) 2011	o		Mandra .		Internet	Nour	uning uning the second		
	o		MWWWAA	Amayor	and showing the	weint	uning landing		wh
(w/\ngp) e0.1 50.1 40.1 40.1	o- o- o-	VIII W	Manan	Minajur		way	under Under Under Texas		
Amplitude (dBuV/m) 20'1	o- o- o- MMM	V-1144	MWWMLA	Minapor	and says the said	week -	unia unia I		
(w/\ngp) e0.1 50.1 40.1 40.1	o- o- o-	V11111W	Manan	Minayanam	requency (MI	hview from the second s	uly brithus		0000 12000

Elliott	El	MC Test Data						
Client: Proxim Corporation	Job Number:	J75847						
Model: PROXMB82 802.11abgn miniPCI module (3x3)	T-Log Number:	T75950						
	Account Manager:	-						
Contact: Ivaylo Tankov		-						
Emissions Standard(s): FCC Part 15 Subpart E, RSS 210	Class:	N/A						
Immunity Standard(s): N/A	Environment:	N/A						
EMC Test Data								
For The								

Proxim Corporation

Model

PROXMB82 802.11abgn miniPCI module (3x3)

Date of Last Test: 9/23/2009

Elliott						EMC Test Data		
Client:	Proxim Corp	oration				Job Number:	J75847	
		000 11aban	miniPOL modulo (2:2)		T-Log Number:	T75950		
Model: PROXMB82 802.11abgn miniPCI me				dule (3x3)		Account Manager:	-	
	Ivaylo Tank							
Standard: FCC Part 15 Subpart E, RSS 210						Class:	N/A	
		RSS 21	0 Rece	iver Ra	adiated Spuric	ous Emissions		
Test Spec	cific Detai	ls						
	Objective:		e of this test listed above		perform final qualification	n testing of the EUT with r	espect to the	
	est Confi was installed	•	xture such the	at the EUT v	vas exposed (i.e. outside (of a host system).		
analyzer o	or power met		ble attenuato	r to prevent		port of the EUT was conne ment system. All measure	•	
For radiat	ed emissions	s testing the r	neasurement	t antenna wa	as located 3 meters from t	he EUT.		
Ambient Conditions:Temperature:18-26 °CRel. Humidity:25-35 %								
		e During T made to the	•	esting				
Deviation	s From Th	ne Standaı	'n					
		ade from the		of the stand	dard.			
			·					
Summary	of Result	S						
Run #	Mode	Channel	Attenuator (dB)	Power Setting	Test Performed	Limit	Result / Margin	
1	Receive	2437MHz (#7)	10		Antenna port conducted	30-1000 MHz: 2nW (-57dBm)	-73.1dBm @ 6821.9MHz (-15.3dB)	
	Receive	5300 MHz (#60)	10		Antenna port conducted	Above 1GHz 5nW (-53dBm)	-79.8dBm @ 13953.3MHz (-12.0dB)	
	Receive	5600 MHz (#120)	10		Antenna port conducted	[Adjusted to -61.8dBm / -57.8dBm per chain to	-70.6dBm @ 13945.3MHz (-12.8dB)	
	Receive	5785 MHz	-		Antenna port conducted	account for 3x3 MIMO operation]	-63.3dBm @ 7713.74MHz (-5.5dB)	

Note - conducted measurements were made using the limit detailed in RSS GEN section 6(b). Radiated emissions form the module in receive mode had already been evaluated during the oringal product evaluation and certification. As the scope of the permissive changes was to add new antennas the receiver spurious measuremeths were limited to direct measurements at the antenna port.

