

Nov 28, 2011

SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.  
NO.1 Shuoying Rd., Hebei Industry Area, Dalang,  
Longhua Town, Baoan, Shenzhen, China

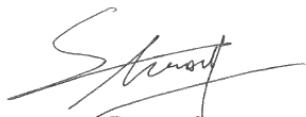
Dear Tony Pan:

Enclosed you will find your file copy of a Part 15 report (FCC ID: XJNPI799).

For your reference, TCB will normally take another one week for reviewing the report.  
Approval will then be granted when no query is sorted.

Please contact me if you have any questions regarding the enclosed material.

Sincerely,



Shawn Xing  
Manager

Enclosure



**SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.**

Application  
For  
Certification

MID  
(WiFi Transceiver)

**(FCC ID: XJNPI799)**

Model: PI799

SZ11100013-1

Billy Li

Nov 28, 2011

- The test results reported in this test report shall refer only to the sample actually tested and shall not refer or be deemed to refer to bulk from which such a sample may be said to have been obtained.
- This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to copy or distribute this report. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results referenced from this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.
- For Terms And Conditions of the services, it can be provided upon request.
- The evaluation data of the report will be kept for 3 years from the date of issuance.

TRF no.: FCC 15C\_Txa  
FCC ID: XJNPI799

**Intertek Testing Services Shenzhen Ltd. Kejiyuan Branch**  
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## INTERTEK TESTING SERVICE

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### LIST OF EXHIBITS

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<i>EXHIBIT 2:</i>	General Description
<i>EXHIBIT 3:</i>	System Test Configuration
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<i>EXHIBIT 9:</i>	Miscellaneous Information
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# INTERTEK TESTING SERVICES

## MEASUREMENT/TECHNICAL REPORT

**SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD. - MODEL: PI799**

**FCC ID: XJNPI799**

This report concerns (check one)      Original Grant  Class II Change

Equipment Type: DTS - Part 15 Digital Transmission Systems (WiFi transmitter portion)

Deferred grant requested per 47 CFR 0.457(d)(1)(ii)?      Yes       No

If yes, defer until : \_\_\_\_\_  
date

Company Name agrees to notify the Commission by: \_\_\_\_\_  
date

of the intended date of announcement of the product so that the grant can be issued on that date.

Transition Rules Request per 15.37?      Yes       No

If no, assumed Part 15, Subpart C for intentional radiator - the new 47 CFR [10-01-10 Edition] provision.

Report prepared by:



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# INTERTEK TESTING SERVICES

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### List of attached file

<b>Exhibit Type</b>	<b>File Description</b>	<b>Filename</b>
Cover Letter	Letter of Agency	agency.pdf
Test Report	Test Report	report.pdf
Test Report	6 dB Bandwidth Plot	6dB.pdf
Test Report	Maximum Power Density Plot	maxpd.pdf
Test Report	Out Band Antenna Conducted Emission Plot	obantcon.pdf
Test Setup Photo	Radiated Emission	radiated photos.pdf
Test Setup Photo	Conducted Emission	conducted photos.pdf
External Photo	External Photo	external photos.pdf
Internal Photo	Internal Photo	internal photos.pdf
Block Diagram	Block Diagram	block.pdf
Schematics	Circuit Diagram	circuit.pdf
Operation Description	Technical Description	descri.pdf
ID Label/Location	Label Artwork and Location	label.pdf
User Manual	User Manual	manual.pdf
RF Exposure info	RF Safety	RF exposure info.pdf

# **INTERTEK TESTING SERVICES**

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## **EXHIBIT 1**

### **SUMMARY OF TEST RESULTS**

# INTERTEK TESTING SERVICES

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## 1.0 Summary of Test

**SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD. - MODEL: PI799**

**FCC ID: XJNPI799**

TEST	REFERENCE	RESULTS
Max. Output power	15.247(b)	Pass
6 dB Bandwidth	15.247(a)(2)	Pass
Max. Power Density	15.247(e)	Pass
Out of Band Antenna Conducted Emission	15.247(d)	Pass
Radiated Emission in Restricted Bands	15.247(d)	Pass
AC Conducted Emission	15.207	Pass
Antenna Requirement	15.203	Pass (See Notes)

Notes: The EUT uses an Internal Integral PIFA Antenna which in accordance to Section 15.203 is considered sufficient to comply with the provisions of this section.

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### **EXHIBIT 2**

#### **GENERAL DESCRIPTION**

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### 2.0 General Description

#### 2.1 Product Description

The Equipment Under Test (EUT) is a MID with internal WiFi module operating at 2.412-2.462GHz for 802.11b/g/n-20MHz, 11 channels with 5MHz channel spacing and 2.422-2.452GHz for 802.11n-40MHz, 7 channels with 5MHz channel spacing. The EUT has a resistive touch screen and can be operated by stylus (not provided) or your nail tapping the screen. The device is powered by 1 X 3.7V rechargeable battery or an AC/DC Adapter (INPUT: AC100-240, 50/60Hz; OUTPUT: DC 5V, 2.5A). For more detailed features description, please refer to the user's manual.

Type of Modulation: CCK for 802.11b, OFDM for 802.11g/n.

Antenna Type: Internal Integral FIFA Antenna.

For electronic filing, the brief circuit description is saved with filename: descri.pdf.

## INTERTEK TESTING SERVICES

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### 2.2 Related Submittal(s) Grants

This is an application for certification of:  
DTS- Part 15 Digital Transmission Systems (WiFi transmitter portion)

Remaining portions are subject to the following procedures:

1. Receiver portion of WiFi: exempt from technical requirement of this Part.
2. Other function: 15B (report no.: SZ11040267-2).

### 2.3 Test Methodology

Both AC mains line-conducted and radiated emission measurements were performed according to the procedures in ANSI C63.4 (2003) and KDB 558074. Radiated emission measurement was performed in semi-anechoic chamber and conducted emission measurement was performed in shield room. For radiated emission measurement, preliminary scans were performed in the semi-anechoic chamber only to determine the worst case modes. All radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the **“Justification Section”** of this Application. All other measurements were made in accordance with the procedures in part 2 of CFR 47.

### 2.4 Test Facility

The Semi-Anechoic chamber and shield room used to collect the radiated data and conducted data are **Intertek Testing Services Shenzhen Ltd. Kejiyuan Branch** and located at 6F, Block D, Huahan Building, Langshan Road, Nanshan District, Shenzhen, P. R. China. This test facility and site measurement data have been fully placed on file with the FCC.

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### **EXHIBIT 3**

#### **SYSTEM TEST CONFIGURATION**

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### 3.0 System Test Configuration

#### 3.1 Justification

For emissions testing, the equipment under test (EUT) setup to transmit continuously to simplify the measurement methodology. Care was taken to ensure proper power supply voltages during testing. During testing, all cables were manipulated to produce worst case emissions. It was powered by an AC/DC Adapter (INPUT: AC100-240, 50/60Hz, 0.65A; OUTPUT: DC 5V, 2.5A) and 1 X 3.7V fully charged battery.

The signal is maximized through rotation and placement in the three orthogonal axes. The antenna height and polarization are varied during the search for maximum signal level. The antenna height is varied from 1 to 4 meters. Radiated emissions are taken at three meters unless the signal level is too low for measurement at that distance. If necessary, a pre-amplifier is used and/or the test is conducted at a closer distance.

All readings are extrapolated back to the equivalent three meter reading using inverse scaling with distance. Analyzer resolution is 100 kHz or greater for frequencies below 1000 MHz. The resolution is 1 MHz or greater for frequencies above 1000 MHz. The spurious emissions more than 20 dB below the permissible value are not reported.

Radiated emission measurement were performed the lowest radio frequency signal generated in the device which is greater than 9 kHz to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.

#### 3.2 EUT Exercising Software

The EUT exercise program (provided by client) used during radiated and conducted testing was designed to exercise the various system components in a manner similar to a typical use. The worst case configuration is used in all specified testing.

The parameters of test software setting:

During the test, Channel and power controlling software provided by the applicant was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the application and is going to be fixed on the firmware of the end product.

#### Power Parameters of IEEE 802.11b/g/n

Test software setting of IEEE 802.11b/g/n			
Channel No.	Output Power	Data rate	Modulation type
1,6,11	13.0	802.11b: 1-11Mbps	802.11b: CCK, DQPSK, DBPSK
	13.0	802.11g: 6-54Mbps	802.11g: OFDM
1,6,11	13.0	802.11n: 7.2-72.2Mbps	802.11n-20M: OFDM
3,6,9	13.0	802.11n: 15-157.5Mbps	802.11n-40M: OFDM

We test all data rate and only the worst – case data is shown in the report.

TRF No.: FCC 15C\_TXa

FCC ID: XJNPI799

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### **3.3 Special Accessories**

There is one ferrite core attached with the adapter.

### **3.4 Measurement Uncertainty**

When determining of the test conclusion, the Measurement Uncertainty of test has been considered.

Uncertainty and Compliance – Unless the standard specifically states that measured values are to be extended by the measurement uncertainty in determining compliance, all compliance determinations are based on the actual measured value.

### **3.5 Equipment Modification**

Any modifications installed previous to testing by SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD. will be incorporated in each production model sold / leased in the United States.

No modifications were installed by Intertek Testing Services Shenzhen Ltd. Kejiyuan Branch.

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### 3.6 Support Equipment List and Description

This product was tested in the following configuration:

Refer List:

Description	Manufacturer	Model No.
Laptop	Lenovo	T61
Hard Disk	Smart.drive	HD-003
USB Cable	Smart.drive	Unshielded, Length 155cm
1394 Cable	Smart.drive	Unshielded, Length 180cm
Micro sd Card	Sandisk	1G
USB Disk	Sandisk	2G
120cm Earphone	ShuoYing	N/A
Adapter with one ferrite core	ShuoYing	THX-005250KB (INPUT: 100-240, 50/60Hz, 0.65A; OUTPUT: DC 5V-2.5A)
60cm unshielded USB Cable	ShuoYing	N/A

All the items listed under section 3.0 of this report are

*Confirmed by:*

*Shawn Xing*  
Manager  
Intertek Testing Services Shenzhen Ltd. Kejiyuan Branch  
Agent for SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.



*Signature*

September 14, 2011 Date

## **INTERTEK TESTING SERVICES**

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### **EXHIBIT 4**

### **MEASUREMENT RESULTS**

## INTERTEK TESTING SERVICES

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Applicant: SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.

Date of Test: September 14, 2011

Model: PI799

### 4.0 Measurement Results

#### 4.1 Maximum Conducted Output Power at Antenna Terminals, FCC Rules 15.247(b)(3):

- The antenna power of the EUT was connected to the input of a power meter. Power was read directly and cable loss correction was added to the reading to obtain power at the EUT antenna terminals.
- The antenna port of the EUT was connected to the input of a spectrum analyzer. The analyzer was set for RBW > 6dB bandwidth and power was read directly in dBm. External attenuation and cable loss were compensated from the measured value.

For antennas with gains of 6 dBi or less, maximum allowed Transmitter output is 1 watt (+30 dBm).

IEEE 802.11b (Antenna Gain = 1.0 dBi) (CCK, 1Mbps)		
Frequency (MHz)	Output in dBm	Output in mWatt
Low Channel: 2412	11.8	15.1
Middle Channel: 2437	12.1	16.2
High Channel: 2462	11.9	15.5

IEEE 802.11g (Antenna Gain = 1.0 dBi) (OFDM, 6Mbps)		
Frequency (MHz)	Output in dBm	Output in mWatt
Low Channel: 2412	11.3	13.5
Middle Channel: 2437	11.5	14.1
High Channel: 2462	11.7	14.8

IEEE 802.11n 20M (Antenna Gain = 1.0 dBi) (OFDM, 7.2Mbps)		
Frequency (MHz)	Output in dBm	Output in mWatt
Low Channel: 2412	12.8	19.1
Middle Channel: 2437	12.4	17.4
High Channel: 2462	12.4	17.4

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IEEE 802.11n 40M (Antenna Gain = 1.0dBi) (OFDM, 15Mbps)		
Frequency (MHz)	Output in dBm	Output in mWatt
Low Channel: 2422	11.8	15.1
Middle Channel: 2437	11.7	14.8
High Channel: 2452	11.6	14.5

Cable loss: 0.5 dB    External Attenuation: 0 dB

Cable loss, external attenuation:  included in OFFSET function  
 added to power meter raw reading

EUT dBm max. output level = 12.8dBm

For RF Safety, the information is saved with filename: RF exposure info.pdf.

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Applicant: SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.

Date of Test: September 14, 2011

Model: PI799

### 4.2 Minimum 6 dB RF Bandwidth, FCC Rule 15.247(a)(2):

The antenna port of the EUT was connected to the input of a spectrum analyzer. Analyzer RES BW was set to 100kHz. For each RF output channel investigated, the spectrum analyzer center frequency was set to the channel carrier. A PEAK output reading was taken, a DISPLAY line was drawn 6 dB lower than PEAK level. The 6dB bandwidth was determined from where the channel output spectrum intersected the display line.

IEEE 802.11b (CCK, 1Mbps)	
Frequency (MHz)	6 dB Bandwidth (MHz)
2412	10.12

IEEE 802.11g (OFDM, 6Mbps)	
Frequency (MHz)	6 dB Bandwidth (MHz)
2412, 2437, 2462	16.56

IEEE 802.11n 20M (OFDM, 7.2Mbps)	
Frequency (MHz)	6 dB Bandwidth (MHz)
2462	17.68

IEEE 802.11n 40M (OFDM, 15Mbps)	
Frequency (MHz)	6 dB Bandwidth (MHz)
2422	36.54

Limit: at least 500 kHz

Refer to the following plots for 6 dB bandwidth sharp:

#### IEEE 802.11b

Plot B2A1: Low Channel 6 dB RF Bandwidth

Plot B2B1: Middle Channel 6 dB RF Bandwidth

Plot B2C1: High Channel 6 dB RF Bandwidth

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### IEEE 802.11g

Plot G2A1: Low Channel 6 dB RF Bandwidth  
Plot G2B1: Middle Channel 6 dB RF Bandwidth  
Plot G2C1: High Channel 6 dB RF Bandwidth

### IEEE 802.11n 20M

Plot N2A1-20M: Low Channel 6 dB RF Bandwidth  
Plot N2B1-20M: Middle Channel 6 dB RF Bandwidth  
Plot N2C1-20M: High Channel 6 dB RF Bandwidth

### IEEE 802.11n 40M

Plot N2A1-40M: Low Channel 6 dB RF Bandwidth  
Plot N2B1-40M: Middle Channel 6 dB RF Bandwidth  
Plot N2C1-40M: High Channel 6 dB RF Bandwidth

For electronic filing, the above plots are saved with filename: 6dB.pdf

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Applicant: SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.

Date of Test: September 14, 2011

Model: PI799

### 4.3 Maximum Power Density Reading, FCC Rule 15.247(e) :

The spectrum analyzer RES BW was set to 3kHz. In order to look for a peak, the START and STOP frequencies were set to the band edges of the maximum output passband. If there is no clear maximum amplitude in any given portion of the band, it may be necessary to make measurements at a number of bands defined by several START and STOP frequency pairs.

Antenna output of the EUT was coupled directly to spectrum analyzer; if an external attenuator and/or cable was used, these losses are compensated for with the analyzer OFFSET function.

IEEE 802.11b (CCK, 1Mbps)	
Frequency (MHz)	Power Density (dBm/3kHz)
2412.713	-23.72

Frequency Span = 1.5MHz

Sweep Time = Frequency Span/3kHz  
= 500 seconds

Cable Loss: 0.5dB

Peak Power Density (at 2412.713MHz) = -23.22 dBm/3kHz

Limit: 8dBm/ 3 kHz

Refer to the following plots for power density data:

Plot B3A1: Low Channel power density

Plot B3B1: Middle Channel power density

Plot B3C1: High Channel power density

For electronic filing, the above plots are saved with filename: maxpd.pdf

## INTERTEK TESTING SERVICES

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Applicant: SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.

Date of Test: September 14, 2011

Model: PI799

### 4.3 Maximum Power Density Reading, FCC Rule 15.247(e)-Continued:

IEEE 802.11g (OFDM, 6Mbps)	
Frequency (MHz)	Power Density (dBm/3kHz)
2411.070	-25.89

Frequency Span = 1.5MHz

Sweep Time = Frequency Span/3kHz  
= 500 seconds

Cable Loss: 0.5dB

Peak Power Density (at 2411.070MHz) = -25.39 dBm/3kHz

Limit: 8dBm/ 3 kHz

Refer to the following plots for power density data :

Plot G3A1: Low Channel power density

Plot G3B1: Middle Channel power density

Plot G3C1: High Channel power density

For electronic filing, the above plots are saved with filename: maxpd.pdf

## INTERTEK TESTING SERVICES

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Applicant: SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.

Date of Test: September 14, 2011

Model: PI799

### 4.3 Maximum Power Density Reading, FCC Rule 15.247(e)-Continued:

IEEE 802.11n 20M (OFDM, 7.2Mbps)	
Frequency (MHz)	Power Density (dBm/3kHz)
2455.400	-25.49

Frequency Span = 1.5MHz

Sweep Time = Frequency Span/3kHz  
= 500 seconds

Cable Loss: 0.5dB

Peak Power Density (at 2455.400MHz) = -24.99 dBm/3kHz

Limit: 8dBm/ 3 kHz

Refer to the following plots for power density data :

Plot N3A1-20M: Low Channel power density  
Plot N3B1-20M: Middle Channel power density  
Plot N3C1-20M: High Channel power density

For electronic filing, the above plots are saved with filename: maxpd.pdf

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Applicant: SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.

Date of Test: September 14, 2011

Model: PI799

### 4.3 Maximum Power Density Reading, FCC Rule 15.247(e)-Continued:

IEEE 802.11n 40M (OFDM, 15Mbps)	
Frequency (MHz)	Power Density (dBm/3kHz)
2418.570	-25.30

Frequency Span = 1.5MHz

Sweep Time = Frequency Span/3kHz  
= 500 seconds

Cable Loss: 0.5dB

Peak Power Density (at 2418.570MHz) = -24.80 dBm/3kHz

Limit: 8dBm/ 3 kHz

Refer to the following plots for power density data :

Plot N3A1-40M: Low Channel power density  
Plot N3B1-40M: Middle Channel power density  
Plot N3C1-40M: High Channel power density

For electronic filing, the above plots are saved with filename: maxpd.pdf

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Applicant: SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.

Date of Test: September 14, 2011

Model: PI799

### 4.4 Out of Band Conducted Emissions, FCC Rule 15.247(d)

In any 100 kHz bandwidth outside the EUT passband, the RF power produced by the modulation products of the spreading sequence, the information sequence, and the carrier frequency shall be at least 20dB below that of the maximum in-band 100 kHz emission, or else shall meet the general limits for radiated emissions at frequencies outside the passband, whichever results in lower attenuation.

All other types of emissions from the EUT shall meet the general limits for radiated frequencies outside the passband.

Refer to the following plots for out of band conducted emissions data with rate of 1MHz for 802.11b and 6MHz for 802.11g.

Plot B4A1, B4A2: Low Channel Emissions

Plot B4B1, B4B2: Middle Channel Emissions

Plot B4C1, B4C2: High Channel Emissions

Plot B4D1, B4D2: Bandedge Emissions

Plot G4A1, G4A2: Low Channel Emissions

Plot G4B1, G4B2: Middle Channel Emissions

Plot G4C1, G4C2: High Channel Emissions

Plot G4D1, G4D2: Bandedge Emissions

Plot N4A1-20M, N4A2-20M: Low Channel Emissions

Plot N4B1-20M, N4B2-20M: Middle Channel Emissions

Plot N4C1-20M, N4C2-20M: High Channel Emissions

Plot N4D1-20M, N4D2-20M: Bandedge Emissions

Plot N4A1-40M, N4A2-40M: Low Channel Emissions

Plot N4B1-40M, N4B2-40M: Middle Channel Emissions

Plot N4C1-40M, N4C2-40M: High Channel Emissions

Plot N4D1-40M, N4D2-40M: Bandedge Emissions

The plots showed all spurious emission and up to the tenth harmonic was measured and they were found to be at least 20 dB below the highest level of the desired power in the passband.

For the electronic filing, the above Channel Emissions and Bandedge Emissions plots are saved with filename: obantcon.pdf.

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Applicant: SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.

Date of Test: September 14, 2011

Model: PI799

### 4.5 Out of Band Radiated Emissions (for emissions in 4.4 above that are less than 20dB below carrier), FCC Rule 15.247(d):

For out of band emissions that are close to or that exceed the 20dB attenuation requirement described in the specification, radiated measurements were performed at a 3m separation distance to determine whether these emissions complied with the general radiated emission requirement.

- Not required, since all emissions are more than 20dB below fundamental
- See attached data sheet

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Applicant: SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.

Date of Test: Nov 28, 2011

Model: PI799

### 4.6 Transmitter Radiated Emissions in Restricted Bands, FCC Rule 15.35(b), (c):

Data is included of the worst case configuration (the configuration which resulted in the highest emission levels). A sample calculation, configuration photographs and data tables of the emissions are included. All measurements were performed with peak detection unless otherwise specified.

The data on the following pages list the significant emission frequencies, the limit and the margin of compliance.

## INTERTEK TESTING SERVICES

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Applicant: SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.

Date of Test: Nov 28, 2011

Model: PI799

### 4.7 Field Strength Calculation

The field strength is calculated by adding the reading on the Spectrum Analyzer to the factors associated with preamplifiers (if any), antennas, cables, pulse desensitization and average factors (when specified limit is in average and measurements are made with peak detectors). A sample calculation is included below.

$$FS = RA + AF + CF - AG + PD + AV$$

Where      FS = Field Strength in dB $\mu$ V/m  
RA = Receiver Amplitude (including preamplifier) in dB $\mu$ V  
CF = Cable Attenuation Factor in dB  
AF = Antenna Factor in dB  
AG = Amplifier Gain in dB  
PD = Pulse Desensitization in dB  
AV = Average Factor in -dB

In the radiated emission table which follows, the reading shown on the data table may reflect the preamplifier gain. An example of the calculations, where the reading does not reflect the preamplifier gain, follows:

$$FS = RA + AF + CF - AG + PD + AV$$

#### Example

Assume a receiver reading of 62.0 dB $\mu$ V is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted. The pulse desensitization factor of the spectrum analyzer was 0 dB, and the resultant average factor was -10 dB. The net field strength for comparison to the appropriate emission limit is 32 dB $\mu$ V/m. This value in dB $\mu$ V/m was converted to its corresponding level in  $\mu$ V/m.

$$RA = 62.0 \text{ dB}\mu\text{V}$$

$$AF = 7.4 \text{ dB}$$

$$CF = 1.6 \text{ dB}$$

$$AG = 29.0 \text{ dB}$$

$$PD = 0 \text{ dB}$$

$$AV = -10 \text{ dB}$$

$$FS = 62 + 7.4 + 1.6 - 29 + 0 + (-10) = 32 \text{ dB}\mu\text{V/m}$$

$$\text{Level in mV/m} = \text{Common Antilogarithm} [(32 \text{ dB}\mu\text{V/m})/20] = 39.8 \mu\text{V/m}$$

## **INTERTEK TESTING SERVICES**

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Applicant: SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.

Date of Test: Nov 28, 2011

Model: PI799

### **4.8 Radiated Emission Configuration Photograph**

Worst Case Radiated Emission (802.11b)  
at  
7386.000MHz

For the electronic filing, the worst case radiated emission configuration photographs are saved with filename: radiated photos.pdf.

## INTERTEK TESTING SERVICES

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Applicant: SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.

Date of Test: Nov 28, 2011

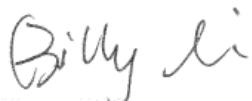
Model: PI799

### 4.9 Radiated Emission Data

The data on the following pages list the significant emission frequencies, the limit and the margin of compliance.

Judgement : Passed by 0.3 dB margin

### ***TEST PERSONNEL:***



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*Tester Signature*

Billy Li, Team Leader

*Typed/Printed Name*

Nov 28, 2011

*Date*

## INTERTEK TESTING SERVICES

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Applicant: SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.

Date of Test: Nov 28, 2011

Model: PI799

Worst Case Operating Mode: Link with wireless Router with 802.11n-40M 2437MHz

Table 1

### Radiated Emissions

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	53.698	42.9	20.0	7.1	30.0	40.0	-10.0
Horizontal	197.993	41.1	20.0	8.5	29.6	43.5	-13.9
Horizontal	521.790	34.1	20.0	19.2	33.3	46.0	-12.7
Vertical	107.993	43.8	20.0	8.4	32.2	43.5	-11.3
Vertical	233.980	49.3	20.0	11.9	41.2	46.0	-4.8
Vertical	413.987	38.7	20.0	17.6	36.3	46.0	-9.7

NOTES:

1. Quasi-Peak detector is used except for others stated.
2. All measurements were made at 3 meters. Harmonic emissions not detected at the 3-meter distances were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other harmonic emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. All emissions are below the QP limit.

Test Engineer: Billy Li

## INTERTEK TESTING SERVICES

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Applicant: SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.

Date of Test: Nov 28, 2011

Model: PI799

Mode: 802.11b (TX-Channel 01)

Table 2  
**Radiated Emissions**

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Average Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	**2412.000	101.5	36.7	27.2	92.0	--	--
Horizontal	*4824.000	54.1	36.1	34.1	52.1	54.0	-1.9
Horizontal	*2389.425	51.4	36.7	27.2	41.9	54.0	-12.1

NOTES:

1. Peak detector is used for the emission measurement.
2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna used for the emission over 1000MHz.
  - \* Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.
  - \*\* Fundamental emissions were measured for determining band-edge compliance of using delta measurements technique.

Test Engineer: Billy Li

## INTERTEK TESTING SERVICES

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Applicant: SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.

Date of Test: Nov 28, 2011

Model: PI799

Mode: 802.11b (TX-Channel 06)

Table 3  
**Radiated Emissions**

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Average Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	*4874.000	54.7	36.1	34.5	53.1	54.0	-0.9
Horizontal	*7311.000	51.9	35.6	37.1	53.4	54.0	-0.6

NOTES: 1. Peak detector is used for the emission measurement.

2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna used for the emission over 1000MHz.

\* Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

Test Engineer: Billy Li

## INTERTEK TESTING SERVICES

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Applicant: SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.

Date of Test: Nov 28, 2011

Model: PI799

Mode: 802.11b (TX-Channel 11)

Table 4  
**Radiated Emissions**

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Average Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	**2462.000	99.7	36.7	27.7	90.7	--	--
Horizontal	*4924.000	53.9	36.1	34.7	52.5	54.0	-1.5
Horizontal	*7386.000	52.1	35.6	37.2	53.7	54.0	-0.3
Horizontal	*2483.553	52.5	36.7	27.7	43.5	54.0	-10.5

NOTES: 1. Peak detector is used for the emission measurement.

2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna used for the emission over 1000MHz.
  - \* Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.
  - \*\* Fundamental emissions were measured for determining band-edge compliance of using delta measurements technique.

Test Engineer: Billy Li

## INTERTEK TESTING SERVICES

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Applicant: SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.

Date of Test: Nov 28, 2011

Model: PI799

Mode: 802.11g (TX-Channel 01)

Table 5  
**Radiated Emissions**

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Average Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	**2412.000	97.1	36.7	27.2	87.6	--	--
Horizontal	*4824.000	51.3	36.1	34.1	49.3	54.0	-4.7
Horizontal	*2389.472	54.0	36.7	27.2	44.5	54.0	-9.5

NOTES: 1. Peak detector is used for the emission measurement.

2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna used for the emission over 1000MHz.
  - \* Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.
  - \*\* Fundamental emissions were measured for determining band-edge compliance of using delta measurements technique.

Test Engineer: Billy Li

## INTERTEK TESTING SERVICES

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Applicant: SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.

Date of Test: Nov 28, 2011

Model: PI799

Mode: 802.11g (TX-Channel 06)

Table 6  
**Radiated Emissions**

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Average Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	*4874.000	50.2	36.1	34.5	48.6	54.0	-5.4
Horizontal	*7311.000	49.2	35.6	37.1	50.7	54.0	-3.3

NOTES: 1. Peak detector is used for the emission measurement.

2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna used for the emission over 1000MHz.
  - \* Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

Test Engineer: Billy Li

## INTERTEK TESTING SERVICES

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Applicant: SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.

Date of Test: Nov 28, 2011

Model: PI799

Mode: 802.11g (TX-Channel 11)

Table 7  
**Radiated Emissions**

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Average Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	**2462.000	96.5	36.7	27.7	87.5	--	--
Horizontal	*4924.000	49.6	36.1	34.7	48.2	54.0	-5.8
Horizontal	*7386.000	51.8	35.6	37.2	53.4	54.0	-0.6
Horizontal	*2483.612	53.8	36.7	27.7	44.8	54.0	-9.2

NOTES: 1. Peak detector is used for the emission measurement.

2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna used for the emission over 1000MHz.
  - \* Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.
  - \*\* Fundamental emissions were measured for determining band-edge compliance of using delta measurements technique.

Test Engineer: Billy Li

## INTERTEK TESTING SERVICES

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Applicant: SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.

Date of Test: Nov 28, 2011

Model: PI799

Mode: 802.11n-20M (TX-Channel 01)

Table 8  
**Radiated Emissions**

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Average Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	**2412.000	98.4	36.7	27.2	88.9	--	--
Horizontal	*4824.000	50.6	36.1	34.1	48.6	54.0	-5.4
Horizontal	*2387.225	53.2	36.7	27.2	43.7	54.0	-10.3

NOTES: 1. Peak detector is used for the emission measurement.

2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna used for the emission over 1000MHz.
  - \* Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.
  - \*\* Fundamental emissions were measured for determining band-edge compliance of using delta measurements technique.

Test Engineer: Billy Li

## INTERTEK TESTING SERVICES

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Applicant: SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.

Date of Test: Nov 28, 2011

Model: PI799

Mode: 802.11n-20M (TX-Channel 06)

Table 9  
**Radiated Emissions**

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Average Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	*4874.000	49.7	36.1	34.5	48.1	54.0	-5.9
Horizontal	*7311.000	51.4	35.6	37.1	52.9	54.0	-1.1

NOTES: 1. Peak detector is used for the emission measurement.

2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna used for the emission over 1000MHz.

\* Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

Test Engineer: Billy Li

## INTERTEK TESTING SERVICES

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Applicant: SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.

Date of Test: Nov 28, 2011

Model: PI799

Mode: 802.11n-20M (TX-Channel 11)

Table 10  
**Radiated Emissions**

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Average Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	**2462.000	96.5	36.7	27.7	87.5	--	--
Horizontal	*4924.000	49.6	36.1	34.7	48.2	54.0	-5.8
Horizontal	*7386.000	50.0	35.6	37.2	51.6	54.0	-2.4
Horizontal	*2483.742	53.7	36.7	27.7	44.7	54.0	-9.3

NOTES: 1. Peak detector is used for the emission measurement.

2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna used for the emission over 1000MHz.
  - \* Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.
  - \*\* Fundamental emissions were measured for determining band-edge compliance of using delta measurements technique.

Test Engineer: Billy Li

## INTERTEK TESTING SERVICES

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Applicant: SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.

Date of Test: Nov 28, 2011

Model: PI799

Mode: 802.11n-40M (TX-Channel 03)

Table 11  
**Radiated Emissions**

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Average Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	**2422.000	95.2	36.7	27.2	85.7	--	--
Horizontal	*4844.000	50.1	36.1	34.2	48.2	54.0	-5.8
Horizontal	*2384.751	54.1	36.7	27.2	44.6	54.0	-9.4

NOTES: 1. Peak detector is used for the emission measurement.

2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna used for the emission over 1000MHz.

\* Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

\*\* Fundamental emissions were measured for determining band-edge compliance of using delta measurements technique.

Test Engineer: Billy Li

## INTERTEK TESTING SERVICES

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Applicant: SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.

Date of Test: Nov 28, 2011

Model: PI799

Mode: 802.11n-40M (TX-Channel 06)

Table 12  
**Radiated Emissions**

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Average Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	*4874.000	49.9	36.1	34.5	48.3	54.0	-5.7
Horizontal	*7311.000	51.6	35.6	37.1	53.1	54.0	-0.9

NOTES: 1. Peak detector is used for the emission measurement.

2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna used for the emission over 1000MHz.
  - \* Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.

Test Engineer: Billy Li

## INTERTEK TESTING SERVICES

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Applicant: SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.

Date of Test: Nov 28, 2011

Model: PI799

Mode: 802.11n-40M (TX-Channel 09)

Table 13  
**Radiated Emissions**

Polarization	Frequency (MHz)	Reading (dB $\mu$ V)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dB $\mu$ V/m)	Average Limit at 3m (dB $\mu$ V/m)	Margin (dB)
Horizontal	**2452.000	94.2	36.7	27.7	85.2	--	--
Horizontal	*4904.000	49.5	36.1	34.7	48.1	54.0	-5.9
Horizontal	*7356.000	51.3	35.6	37.2	52.9	54.0	-1.1
Horizontal	*2483.706	54.3	36.7	27.7	45.3	54.0	-8.7

NOTES: 1. Peak detector is used for the emission measurement.

2. All measurements were made at 3 meters. Radiated emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other radiated emissions than those reported were detected at a test distance of 0.3-meter.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna used for the emission over 1000MHz.
  - \* Emission within the restricted band meets the requirement of section 15.205. The corresponding limit as per 15.209 is based on Quasi peak limit for frequencies below 1000 MHz and average limit for frequencies over 1000 MHz. The radio frequency emissions above 1GHz also meet corresponding 20dB permitted peak limit with a peak detector function.
  - \*\* Fundamental emissions were measured for determining band-edge compliance of using delta measurements technique.

Test Engineer: Billy Li

## **INTERTEK TESTING SERVICES**

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### **4.10 Conducted Emission Configuration Photograph**

Worst Case Line-Conducted Configuration  
at  
0.182 MHz

For electronic filing, the worst case conducted emission configuration photograph is saved with filename: conducted photos.pdf.

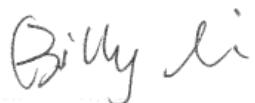
## INTERTEK TESTING SERVICES

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### 4.11 Conducted Emission Data

Judgement: Passed by 2.2 dB margin

**TEST PERSONNEL:**



---

Signature

Billy Li, Team Leader  
Typed/Printed Name

Nov 28, 2011  
Date

# INTERTEK TESTING SERVICES

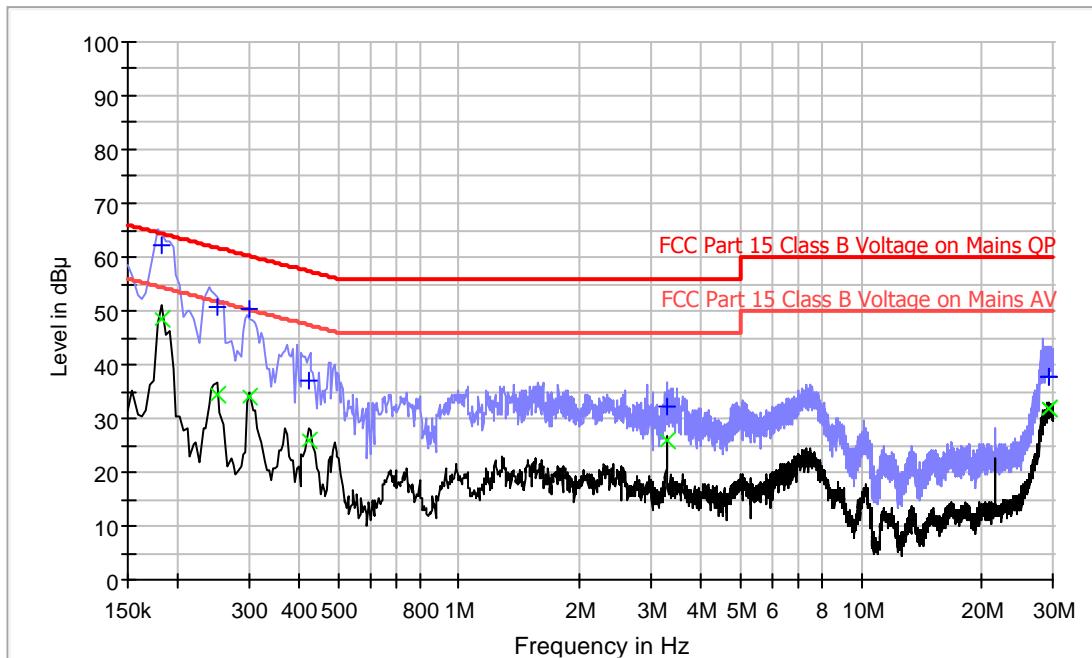
Company: SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.

Date of Test: Nov 28, 2011

Model: PI799

Worst Case Operating Mode: Transmit with 802.11n-40M 2437MHz

## Conducted Emission Test - FCC



### Result Table-QP

Frequency (MHz)	QuasiPeak (dB $\mu$ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.182000	62.2	L1	9.6	2.2	64.4
0.250000	50.9	L1	9.6	10.9	61.8
0.302000	50.4	L1	9.6	9.8	60.2
0.422000	37.1	L1	9.6	20.3	57.4
3.290000	32.1	L1	9.8	23.9	56.0
29.450000	37.8	L1	10.2	22.2	60.0

### Result Table-AV

Frequency (MHz)	Average (dB $\mu$ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.182000	48.3	L1	9.6	6.1	54.4
0.250000	34.3	L1	9.6	17.5	51.8
0.302000	34.1	L1	9.6	16.1	50.2
0.422000	25.9	L1	9.6	21.5	47.4
3.290000	26.1	L1	9.8	19.9	46.0
29.450000	32.0	L1	10.2	18.0	50.0

Test Engineer: Billy Li

TRF No.: FCC 15C\_TXa

FCC ID: XJNPI799

# INTERTEK TESTING SERVICES

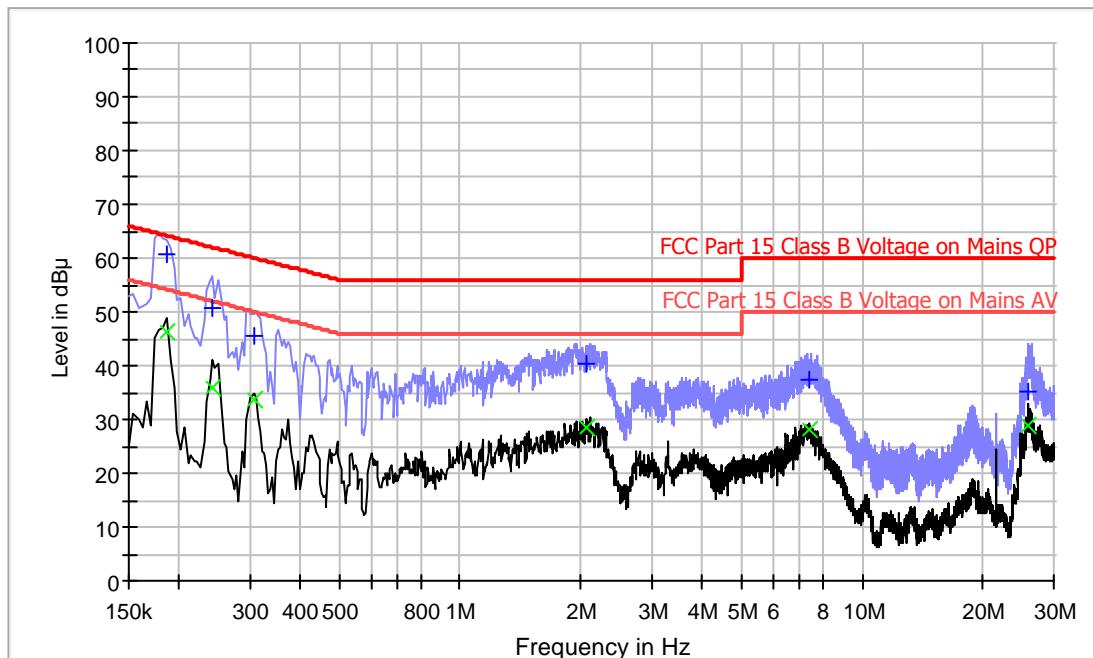
Company: SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.

Date of Test: Nov 28, 2011

Model: PI799

Worst Case Operating Mode: Transmit with 802.11n-40M 2437MHz

## Conducted Emission Test - FCC



## Result Table-QP

Frequency (MHz)	QuasiPeak (dB μ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.186000	60.8	N	9.6	3.4	64.2
0.242000	50.9	N	9.6	11.1	62.0
0.306000	45.5	N	9.6	14.6	60.1
2.054000	40.4	N	9.8	15.6	56.0
7.370000	37.3	N	10.0	22.7	60.0
25.934000	35.4	N	10.2	24.6	60.0

## Result Table-AV

Frequency (MHz)	Average (dB μ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.186000	46.3	N	9.6	7.9	54.2
0.242000	35.8	N	9.6	16.2	52.0
0.306000	33.6	N	9.6	16.5	50.1
2.054000	28.6	N	9.8	17.4	46.0
7.370000	28.2	N	10.0	21.8	50.0
25.934000	29.0	N	10.2	21.0	50.0

Test Engineer: Billy Li

TRF No.: FCC 15C\_TXa

FCC ID: XJNPI799

## INTERTEK TESTING SERVICES

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Applicant: SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.

Date of Test: Nov 28, 2011

Model: PI799

### 4.12 Radiated Emissions from Digital Section of Transceiver, FCC Ref: 15.109

- [ ] Not required - No digital part
- [ ] Test results are attached
- [ x ] Included in the separated Verification report.

## INTERTEK TESTING SERVICES

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Applicant: SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD.

Date of Test: Nov 28, 2011

Model: PI799

### 4.13 Transmitter Duty Cycle Calculation and Measurements, FCC Rule 15.35(b), (c)

The EUT antenna output port was connected to the input of the spectrum analyzer. The analyzer center frequency was set to EUT RF channel carrier. The SWEP function on the analyzer was set to ZERO SPAN. The Transmitter ON time was determined from the resultant time-amplitude display:

	See attached spectrum analyzer chart (s) for Transmitter timing
	See Transmitter timing diagram provided by manufacturer
x	Not applicable, duty cycle was not used.

**INTERTEK TESTING SERVICES**

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**EXHIBIT 5**

**EQUIPMENT PHOTOGRAPHS**

## INTERTEK TESTING SERVICES

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### 5.0 Equipment Photographs

For electronic filing, the photographs are saved with filename: external photos.doc & internal photos.pdf.

## **INTERTEK TESTING SERVICES**

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### **EXHIBIT 6**

### **PRODUCT LABELLING**

## INTERTEK TESTING SERVICES

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### 6.0 Product Labelling

For electronic filing, the FCC ID label artwork and location is saved with filename: label.pdf.

## **INTERTEK TESTING SERVICES**

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### **EXHIBIT 7**

### **TECHNICAL SPECIFICATIONS**

## INTERTEK TESTING SERVICES

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### 7.0 Technical Specifications

For electronic filing, the block diagram and circuit diagram are saved with filename: block.pdf and circuit.pdf respectively.

**INTERTEK TESTING SERVICES**

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**EXHIBIT 8**

**INSTRUCTION MANUAL**

## INTERTEK TESTING SERVICES

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### 8.0 Instruction Manual

For electronic filing, a preliminary copy of the Instruction Manual is saved with filename: manual.pdf.

This manual will be provided to the end-user with each unit sold/leased in the United States.

## **INTERTEK TESTING SERVICES**

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### **EXHIBIT 9**

#### **MISCELLANEOUS INFORMATION**

## INTERTEK TESTING SERVICES

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### 9.0 Discussion of Pulse Desensitization

The determination of pulse desensitivity was made in accordance with Hewlett Packard Application Note 150-2, *Spectrum Analysis ... Pulsed RF*.

Pulse desensitivity is not applicable for this device since the transmitter transmits the RF signal continuously.

## **INTERTEK TESTING SERVICES**

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### **EXHIBIT 10**

### **TEST EQUIPMENT LIST**

## INTERTEK TESTING SERVICES

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### 10.0 Test Equipment List

Equipment No.	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due Date
SZ061-03	BiConiLog Antenna	ETS	3142C	00066460	02-Jul-11	02-Jan-13
SZ185-01	EMI Receiver	R&S	ESCI	100547	08-Mar-11	08-Mar-12
SZ061-08	Horn Antenna	ETS	3115	00092346	15-Oct-11	15-Oct-12
SZ056-03	Spectrum Analyzer	R&S	FSP 30	101148	08-Mar-11	08-Mar-12
SZ181-04	Preamplifier	Agilent	8449B	3008A02474	08-Mar-11	08-Mar-12
SZ188-01	Anechoic Chamber	ETS	RFD-F/A-100	4102	15-Jan-11	15-Jan-12
SZ062-02	RF Cable	RADIALL	RG 213U	--	24-Sep-11	24-Mar-12
SZ062-06	RF Cable	RADIALL	0.04-26.5GHz	--	03-Sep-11	03-Mar-12
SZ062-12	RF Cable	RADIALL	0.04-26.5GHz	--	03-Sep-11	03-Mar-12
SZ067-04	Notch Filter	Micro-Tronics	BRM5070 2-02	--	15-Jul-11	15-Jul-12
SZ185-02	EMI Test Receiver	R&S	ESCI	100692	05-Nov-11	05-Nov-12
SZ187-01	Two-Line V-Network	R&S	ENV216	100072	05-Nov-11	05-Nov-12
SZ187-02	Two-Line V-Network	R&S	ENV216	100073	05-Nov-11	05-Nov-12
SZ188-03	Shielding Room	ETS	RFD-100	4100	16-Sep-10	16-Sep-13
SZ182-01	RF Power Meter	BOONTON	4232A	11002	08-Mar-11	08-Mar-12
SZ182-01-01	Power Sensor	BOONTON	51011-EMC	34400	08-Mar-11	08-Mar-12