

Mar 2, 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: XJN-SYTAB10MT).

For your reference, TCB will normally take another 20 days 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

PID (WiFi Transceiver)

(FCC ID: XJN-SYTAB10MT)

Model: SYTAB10MT

Billy li

SZ11010019-1 Billy Li Mar 2, 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.
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- 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.

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MEASUREMENT/TECHNICAL REPORT

SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD. - MODEL: SYTAB10MT

FCC ID: XJN-SYTAB10MT

This report concerns (check one)	Original Grant X Class II Change
Equipment Type: <u>DTS - Part 15 Dig</u> portion)	gital Transmission Systems (WiFi transmitter
Deferred grant requested per 47 CFR	0.457(d)(1)(ii)? Yes NoX
	If yes, defer until : date
Company Name agrees to notify the C	
, , , , , , , , , , , , , , , , , , , ,	date
of the intended date of announcements	ent of the product so that the grant can be
Transition Rules Request per 15.37?	Yes NoX_
If no, assumed Part 15, Subpart C [10-01-09 Edition] provision.	for intentional radiator - the new 47 CFR
Report prepared by:	Steront
I P	Shawn Xing ntertek Testing Services Shenzhen Ltd. Kejiyuan Branch
ľ	SF, Block D, Huahan Building, Langshan Road, Nanshan District, Shenzhen, P. R. China Phone: (86 755) 8601 6288 Fax: (86 755) 8601 6751

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List of attached file

Exhibit Type	File Description	Filename
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 Report	Bandedge Plot	bandedge.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

EXHIBIT 1 SUMMARY OF TEST RESULTS

1.0 Summary of Test

SHUOYING INDUSTRIAL (SHENZHEN) CO., LTD. - MODEL: SYTAB10MT FCC ID: XJN-SYTAB10MT

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.

EXHIBIT 2

GENERAL DESCRIPTION

2.0 **General Description**

2.1 Product Description

The Equipment Under Test (EUT) is a PID with internal WiFi module operating at 2.412-2.462GHz, 11 channels with 5MHz channel spacing. The EUT has a resistive touch screen and can be operated by stylus or your nail tapping the screen. The device is powered by 2 X 4.2V rechargeable batteries or an AC/DC Adapter (INPUT: AC100-240, 50/60Hz 0.65A; OUTPUT: DC 9V, 2.5A). For more detailed features description, please refer to the user's manual.

Type of Modulation: CCK for 802.11b and OFDM for 802.11g.

Antenna Type: Internal Integral PIFA Antenna.

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

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 Verification (report no.: SZ11010019-3).

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 **Interterk 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.

EXHIBIT 3

SYSTEM TEST CONFIGURATION

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 9V, 2.5A) and 2 X 4.2V fully charged batteries.

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

Test software setting of IEEE 802.11b/g			
Channel No. Output Power Data rate Modulation type			
	13.5	802.11b: 1-11Mbps	802.11b: CCK(BPSK, QPSK, CCK)
1,6,11	13.5	802.11g: 6-54Mbps	802.11g: OFDM (BPSK, QPSK, OFDM, 16/64QAM)

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

3.3 Special Accessories

There are one AC Adapter (Model: THX-009250KB) with one ferrite core attached and one HDMI cable with one ferrite core attached.

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.

3.6 Support Equipment List and Description

This product was tested in the following configuration:

Refer List:

Description	Manufacturer	Model No.
Micro SD Card	Sandisk	SDSDQ-2048-P36M (2G)
Micro SD Card	Sandisk	SDSDQ-2048-P36M (2G)
USB Disk	SSK	SFD087 (2G)
USB Disk	SSK	SFD087 (2G)
1.1m Earphone	ShuoYing	NA
Adapter	ShuoYing	THX-009250KB (INPUT: 100-240, 50/60Hz; OUTPUT: DC 9V-2.5A)
HDMI Cable	ShuoYing	Unshielded, Length 100cm with one ferrite core attached
Load Terminal	MTC	TL-01
5.0m RJ45 Cable	N/A	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

Mar 2, 2011 Date

EXHIBIT 4

MEASUREMENT RESULTS

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

Date of Test: Mar 2, 2011 Model: SYTAB10MT

4.0 Measurement Results

- 4.1 Maximum Conducted Output Power at Antenna Terminals, FCC Rules 15.247(b)(3):
 - [x] 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 = 0.5dBi) (CCK, 1Mbps)		
Frequency (MHz)	Output in dBm	Output in mWatt
Low Channel: 2412	13.0	20.0
Middle Channel: 2437	12.9	19.5
High Channel: 2462	13.2	20.9

IEEE 802.11g (Antenna Gain = 0.5dBi) (OFDM, 6Mbps)		
Frequency (MHz)	Output in dBm	Output in mWatt
Low Channel: 2412	12.8	19.1
Middle Channel: 2437	13.0	20.0
High Channel: 2462	13.1	20.4

Cable loss: <u>0.5</u> dB External Attenuation: 0 dB

Cable loss, external attenuation: [] included in OFFSET function

[x] added to power meter raw reading

EUT dBm max. output level = 13.2dBm

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

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

Date of Test: Mar 2, 2011 Model: SYTAB10MT

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, 2437, 2462	12.08	

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

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

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

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

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

Date of Test: Mar 2, 2011

Model: SYTAB10MT

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)	
2462.872	-21.48	

Frequency Span = 1.5MHz

Sweep Time = Frequency Span/3kHz

= 500 seconds

Cable Loss: 0.5dB

Peak Power Density (at 2462.872MHz) = -21.48 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

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

Date of Test: Mar 2, 2011

Model: SYTAB10MT

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

IEEE 802.11g (OFDM, 6Mbps)		
Frequency (MHz) Power Density (dBm/3kHz)		
2462.143	-21.42	

Frequency Span = 1.5MHz

Sweep Time = Frequency Span/3kHz

= 500 seconds

Cable Loss: 0.5dB

Peak Power Density (at 2462.143MHz) = -21.42 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

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

Date of Test: Mar 2, 2011

Model: SYTAB10MT

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 G4A1, G4A2: Low Channel Emissions Plot G4B1, G4B2: Middle Channel Emissions Plot G4C1, G4C2: High Channel Emissions Plot B4D1 - B4D2: Bandedge Emissions Plot G4D1 - G4D2: 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 plots are saved with filename: obantcon.pdf

Furthermore, delta measurement technique for measuring bandage emissions was shown as below:

802.11b

(i) Lower channel 2412MHz:

Peak Resultant field strength = Fundamental emissions (peak value) - delta from the bandedge plot

= $93.2dB\mu\nu/m-43.0dB$ = $50.2dB\mu\nu/m$

(ii) Upper channel 2464MHz:

Peak Resultant field strength = Fundamental emissions (peak value) - delta from the bandedge plot

 $= 93.8 dB\mu v/m-52.8 dB$ = 41.0 dB\u00fc\u00e4r/m

802.11g

(iii) Lower channel 2412MHz:

Peak Resultant field strength = Fundamental emissions (peak value) - delta from the bandedge plot

 $= 89.9 dB \mu v/m - 36.2 dB$ = 53.7 dB \(\pu v/m \)

(iiii) Upper channel 2462MHz:

Peak Resultant field strength = Fundamental emissions (peak value) – delta from the bandedge plot

= 90.9dB μ v/m-45.6dB = 45.3dB μ v/m

The resultant field strength meets the general radiated emission limit in section 15.209, which does not exceed 74 dB $\mu\nu$ /m (Peak Limit) and 54dB $\mu\nu$ /m (Average Limit).

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

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

Date of Test: Mar 2, 2011 Model: SYTAB10MT

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.

	$\times]$	Not required, since al	II emissions are mo	re than 20dB belo	ow fundamental
ſ	.]	See attached data sh	neet		

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

Date of Test: Mar 2, 2011 Model: SYTAB10MT

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.

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

Date of Test: Mar 2, 2011 Model: SYTAB10MT

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 μ 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 μ V/m. This value in dB μ V/m was converted to its corresponding level in μ V/m.

 $RA = 62.0 \text{ dB}\mu\text{V}$ AF = 7.4 dB CF = 1.6 dB AG = 29.0 dB PD = 0 dBAV = -10 dB

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

Level in mV/m = Common Antilogarithm [(32 dB μ V/m)/20] = 39.8 μ V/m

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

Date of Test: Mar 2, 2011 Model: SYTAB10MT

4.8 Radiated Emission Configuration Photograph

Worst Case Radiated Emission at 7386.000MHz

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

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

Date of Test: Mar 2, 2011 Model: SYTAB10MT

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 1.0 dB margin

TEST	PERS	SON	NEL:
------	------	-----	------

Tester Signature

Billy Li, Project Engineer_ Typed/Printed Name

Mar 2, 2011

Date

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

Date of Test: Mar 2, 2011 Model: SYTAB10MT

Worst Case Operating Mode: Link with wireless Router with 802.11g 2437MHz

Table 1

Radiated Emissions

Polarization	Frequency	Reading	Pre-	Antenna	Net	Limit	Margin
	(MHz)	(dBµV)	Amp	Factor	at 3m	at 3m	(dB)
			Gain	(dB)	(dBµV/m)	(dBµV/m)	
			(dB)				
Horizontal	108.004	46.0	20.0	9.4	35.4	43.5	-8.1
Horizontal	168.528	44.9	20.0	10.1	35.0	43.5	-8.5
Horizontal	264.394	42.8	20.0	13.8	36.6	46.0	-9.4
Vertical	30.445	36.3	20.0	19.1	35.4	40.0	-4.6
Vertical	33.384	39.5	20.0	17.4	36.9	40.0	-3.1
Vertical	51.905	45.8	20.0	9.5	35.3	40.0	-4.7

NOTES: 1. Quasi-Peak detector is used except for others stated.

- 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

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

Date of Test: Mar 2, 2011 Model: SYTAB10MT

Mode: 802.11b (TX-Channel 01)

Table 2 Radiated Emissions

Polarization	Frequency	Reading	Pre-	Antenna	Net	Average Limit	Margin
	(MHz)	(dBµV)	Amp	Factor	at 3m	at 3m	(dB)
			Gain	(dB)	(dBµV/m)	(dBµV/m)	
			(dB)				
Horizontal	**2412.000	102.7	36.7	27.2	93.2	-	
Horizontal	*4824.000	50.9	36.1	34.1	48.9	54.0	-5.1
Horizontal	*1608.120	61.7	36.8	26.5	51.4	54.0	-2.6

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

Test Engineer: Billy Li

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

Date of Test: Mar 2, 2011 Model: SYTAB10MT

Mode: 802.11b (TX-Channel 06)

Table 3
Radiated Emissions

Polarization	Frequency	Reading	Pre-	Antenna	Net	Average Limit	Margin
	(MHz)	(dBµV)	Amp	Factor	at 3m	at 3m	(dB)
			Gain	(dB)	(dBµV/m)	(dBµV/m)	
			(dB)				
Horizontal	*4874.000	50.5	36.1	34.5	48.9	54.0	-5.1
Horizontal	*7311.000	51.4	35.6	37.1	52.9	54.0	-1.1
Horizontal	*1624.760	62.6	36.8	26.5	52.3	54.0	-1.7

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.

Test Engineer: Billy Li

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

Date of Test: Mar 2, 2011 Model: SYTAB10MT

Mode: 802.11b (TX-Channel 11)

Table 4
Radiated Emissions

Polarization	Frequency	Reading	Pre-	Antenna	Net	Average Limit	Margin
	(MHz)	(dBµV)	Amp	Factor	at 3m	at 3m	(dB)
			Gain	(dB)	(dBµV/m)	(dBµV/m)	
			(dB)	` ,	, ,	` '	
Horizontal	**2462.000	102.8	36.7	27.7	93.8		
Horizontal	*4924.000	51.1	36.1	34.7	49.7	54.0	-4.3
Horizontal	*7386.000	51.4	35.6	37.2	53.0	54.0	-1.0

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

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

Date of Test: Mar 2, 2011 Model: SYTAB10MT

Mode: 802.11g (TX-Channel 01)

Table 5
Radiated Emissions

Polarization	Frequency	Reading	Pre-	Antenna	Net	Average Limit	Margin
	(MHz)	(dBµV)	Amp	Factor	at 3m	at 3m	(dB)
			Gain	(dB)	(dBµV/m)	(dBµV/m)	
			(dB)				
Horizontal	**2412.000	99.4	36.7	27.2	89.9		
Horizontal	*4824.000	50.9	36.1	34.1	48.9	54.0	-5.1
Horizontal	*1608.120	60.4	36.8	26.5	50.1	54.0	-3.9

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

Test Engineer: Billy Li

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

Date of Test: Mar 2, 2011 Model: SYTAB10MT

Mode: 802.11g (TX-Channel 06)

Table 6
Radiated Emissions

Polarization	Frequency	Reading	Pre-	Antenna	Net	Average Limit	Margin
	(MHz)	(dBµV)	Amp	Factor	at 3m	at 3m	(dB)
			Gain	(dB)	(dBµV/m)	(dBµV/m)	
			(dB)				
Horizontal	*4874.000	50.6	36.1	34.5	49.0	54.0	-5.0
Horizontal	*7311.000	50.8	35.6	37.1	52.3	54.0	-1.7
Horizontal	*1624.760	61.3	36.8	26.5	51.0	54.0	-3.0

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

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

Date of Test: Mar 2, 2011 Model: SYTAB10MT

Mode: 802.11g (TX-Channel 11)

Table 7
Radiated Emissions

Polarization	Frequency	Reading	Pre-	Antenna	Net	Average Limit	Margin
	(MHz)	(dBµV)	Amp	Factor	at 3m	at 3m	(dB)
			Gain	(dB)	(dBµV/m)	(dBµV/m)	
			(dB)				
Horizontal	**2462.000	99.9	36.7	27.7	90.9		
Horizontal	*4924.000	51.1	36.1	34.7	49.7	54.0	-4.3
Horizontal	*7386.000	51.3	35.6	37.2	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.
- ** Fundamental emissions were measured for determining band-edge compliance of using delta measurements technique.

Test Engineer: Billy Li

4.10 Conducted Emission Configuration Photograph

Worst Case Neutral-Conducted Configuration at 0.430 MHz

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

4.11 Conducted Emission Data

Judgement: Passed by 9.0 dB margin

TEST PERSONNEL:

Signature

Billy Li, Project Engineer

Typed/Printed Name

Mar 2, 2011

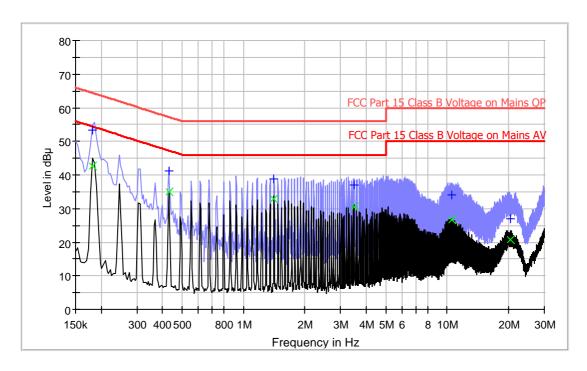
Date

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

Date of Test: Mar 2, 2011 Model: SYTAB10MT

Worst Case Operating Mode: Transmit with 802.11g 2437MHz

Conducted Emission Test - FCC



Result Table-QP

_			_		
Frequency	QuasiPeak	Line	Corr	Margin	Limit
(MHz)	(dB µ V)			(dB)	(dB µ V)
0.182000	53.3	L1	9.6	11.1	64.4
0.430000	41.3	L1	9.6	16.0	57.3
1.414000	38.9	L1	9.7	17.1	56.0
3.506000	37.1	L1	9.8	18.9	56.0
10.578000	34.1	L1	9.9	25.9	60.0
20.494000	26.9	L1	10.0	33.1	60.0

Result Table-AV

Frequency	Average	Line	Corr.	Margin	Limit
(MHz)	(dB µ V)		(dB)	(dB)	(dB µ V)
0.182000	42.7	L1	9.6	11.7	54.4
0.430000	34.9	L1	9.6	12.4	47.3
1.414000	32.8	L1	9.7	13.2	46.0
3.506000	30.4	L1	9.8	15.6	46.0
10.578000	26.8	L1	9.9	23.2	50.0
20.494000	20.6	L1	10.0	29.4	50.0

Test Engineer: Billy Li

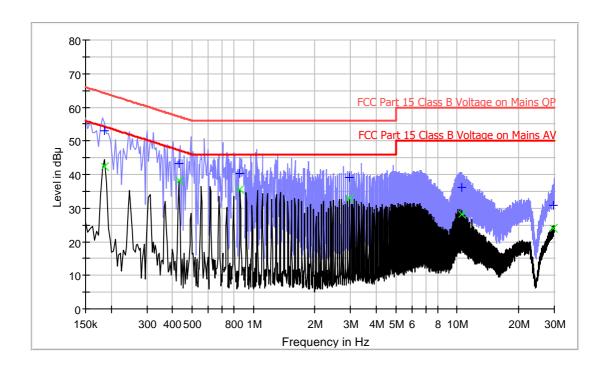
TRF No.: FCC 15C_TXa FCC ID: XJN-SYTAB10MT

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

Date of Test: Mar 2, 2011 Model: SYTAB10MT

Worst Case Operating Mode: Transmit with 802.11g 2437MHz

Conducted Emission Test - FCC



Result Table-QP

Frequency	QuasiPeak	Line	Corr	Margin	Limit
(MHz)	(dB μ V)			(dB)	(dB µ V)
0.186000	52.9	N	9.6	11.3	64.2
0.430000	43.3	N	9.6	14.0	57.3
0.862000	40.2	N	9.7	15.8	56.0
2.954000	39.0	N	9.8	17.0	56.0
10.582000	36.0	N	10.0	24.0	60.0
29.798000	30.7	N	10.3	29.3	60.0

Result Table-AV

Frequency	Average	Line	Corr.	Margin	Limit
(MHz)	(dB µ V)		(dB)	(dB)	(dB µ V)
0.186000	42.5	N	9.6	11.7	54.2
0.430000	38.3	N	9.6	9.0	47.3
0.862000	35.7	N	9.7	10.3	46.0
2.954000	32.8	N	9.8	13.2	46.0
10.582000	28.3	N	10.0	21.7	50.0
29.798000	23.9	N	10.3	26.1	50.0

Test Engineer: Billy Li TRF No.: FCC 15C_TXa FCC ID: XJN-SYTAB10MT

	e of Test: Mar 2, 2011 el: SYTAB10MT
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.

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

TRF No.: FCC 15C_TXa FCC ID: XJN-SYTAB10MT

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

Date of Test: Mar 2, 2011 Model: SYTAB10MT

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
Х	Not applicable, duty cycle was not used.

TRF No.: FCC 15C_TXa FCC ID: XJN-SYTAB10MT

EXHIBIT 5

EQUIPMENT PHOTOGRAPHS

TRF No.: FCC 15C_TXa FCC ID: XJN-SYTAB10MT

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5.0 **Equipment Photographs**

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

TRF No.: FCC 15C_TXa FCC ID: XJN-SYTAB10MT

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EXHIBIT 6

PRODUCT LABELLING

TRF No.: FCC 15C_TXa FCC ID: XJN-SYTAB10MT

6.0 **Product Labelling**

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

TRF No.: FCC 15C_TXa FCC ID: XJN-SYTAB10MT

EXHIBIT 7 TECHNICAL SPECIFICATIONS

TRF No.: FCC 15C_TXa

7.0 <u>Technical Specifications</u>

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

TRF No.: FCC 15C_TXa

EXHIBIT 8

INSTRUCTION MANUAL

TRF No.: FCC 15C_TXa FCC ID: XJN-SYTAB10MT

ID: XJN-SYTAB10MT 41

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.

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EXHIBIT 9

MISCELLANEOUS INFORMATION

TRF No.: FCC 15C_TXa FCC ID: XJN-SYTAB10MT

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9.0 <u>Discussion of Pulse Desensitization</u>

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.

TRF No.: FCC 15C_TXa

EXHIBIT 10 TEST EQUIPMENT LIST

TRF No.: FCC 15C_TXa

10.0 **Test Equipment List**

Equipment No.	Equipment	Manufactu rer	Model No.	Serial No.	Cal. Date	Due Date
SZ061-03	BiConiLog Antenna	ETS	3142C	00066460	25-Nov-09	25-May-11
SZ061-08	Horn Antenna	ETS	3115	00092346	15-Mar-10	15-Sep-11
SZ185-01	EMI Receiver	R&S	ESCI	100547	08-Mar-10	08-Mar-11
SZ056-03	Spectrum Analyzer	R&S	FSP 30	101148	18-Mar-10	18-Mar-11
SZ181-04	Preamplifier	Agilent	8449B	3008A02474	18-Mar-10	18-Mar-11
SZ188-01	Anechoic Chamber	ETS	RFD-F/A- 100	4102	15-Jan-11	15-Jan-12
SZ062-02	RF Cable	RADIALL	RG 213U		30-Sep-10	30-Mar-11
SZ062-06	RF Cable	RADIALL	0.04- 26.5GHz		16-Sep-10	16-Sep-11
SZ062-12	RF Cable	RADIALL	0.04- 26.5GHz		16-Sep-10	16-Sep-11
SZ185-02	EMI Test Receiver	R&S	ESCI	100692	12-Nov-10	12-Nov-11
SZ187-01	Two-Line V- Network	R&S	ENV216	100072	12-Nov-10	12-Nov-11
SZ187-02	Two-Line V- Network	R&S	ENV216	100073	12-Nov-10	12-Nov-11
SZ188-03	Shielding Room	ETS	RFD-100	4100	16-Sep-10	16-Sep-11
SZ067-04	Notch Filter	Micro- Tronics	BRM5070 2-02		30-Sep-10	30-Mar-11
SZ182-01	RF Power Meter	BOONTO N	4232A	11002	08-Mar-10	08-Mar-11
SZ182-01- 01	Power Sensor	BOONTO N	51011- EMC	34400	08-Mar-10	08-Mar-11

TRF No.: FCC 15C_TXa FCC ID: XJN-SYTAB10MT