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YIBIN WEIHENG DIGITAL COMPANY LIMITED

TEST REPORT

SCOPE OF WORK
FCC TESTING–I101, NOQB5, NOXQI

REPORT NUMBER
181220025SZN-003

ISSUE DATE **[REVISED DATE]**
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TEST REPORT

Intertek Report No.: 181220025SZN-003

YIBIN WEIHENG DIGITAL COMPANY LIMITED

Application
For
Certification

FCC ID: 2AR7L-I101

TABLET PC

Model: I101, NOQB5, NOXQI

Brand name: N/A

2.4GHz Transceiver

Report No.: 181220025SZN-003

We hereby certify that the sample of the above item is considered to comply with the requirements of FCC Part 15, Subpart C for Intentional Radiator, mention 47 CFR [10-1-17]

Prepared and Checked by:

Joanna Jiao
Engineer

Approved by:

Kidd Yang
Technical Supervisor
Date: 08 January, 2019

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MEASUREMENT/TECHNICAL REPORT

TABLET PC

Model: I101

FCC ID: 2AR7L-I101

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

Equipment Type: DTS - Part 15 Digital Transmission Systems (Bluetooth LE portion)

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

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 ___X___

If no, assumed Part 15, Subpart C for intentional radiator - the new 47 CFR [10-01-17] Edition] provision.

Report prepared by:

Joanna Jiao
Intertek Testing Services Shenzhen Ltd.
Longhua Branch
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Exhibit Type	File Description	Filename
Cover Letter	Letter of Agency	agency.pdf
Test Report	Test Report	report.pdf
Test Setup Photo	Radiated Emission	radiated 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
Cover Letter	Confidentiality Letter	request.pdf

EXHIBIT 1

SUMMARY OF TEST RESULTS

1.0 Summary of Test results

TABLET PC

Model: I101

FCC ID: 2AR7L-I101

TEST ITEM	REFERENCE	RESULTS
Max. Output power	15.247(b)(3)	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 Integral 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 TABLET PC with BT4.0 (dual-mode) operating in 2402-2480MHz and 2.4G WIFI function operating in 2412-2462MHz, The EUT is powered by DC 5V 3A from adapter and DC 3.8V 5000mAh rechargeable Li-Ion Battery . Bluetooth and WiFi transmitters are share one antenna, but cannot transmit simultaneously. For more detail information pls. refer to the user manual.

Bluetooth Version: 4.0 (BLE)
Antenna Type: Integral antenna
Antenna Gain: 1.5 dBi Max
Modulation Type: GFSK

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

The Models: NOQB5, NOXQI is the same as the Model: I101 in hardware and electrical aspect. The difference in model number serves as marketing strategy.

2.2 Related Submittal(s) Grants

This is an application for certification of transceiver for the TABLET PC which has Bluetooth function (BLE), and for the classic Bluetooth mode, WIFI mode were tested and demonstrated in report 181220025SZN-002, 181220025SZN-004.

2.3 Test Methodology

Both AC mains line-conducted and radiated emission measurements were performed according to the procedures in ANSI C63.10 (2013) and KDB 558074 D01 v05. Radiated emission measurement was performed in Semi-anechoic chamber and conducted emission measurement was performed in shielded 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 shielded room used to collect the radiated data and conducted data are **Intertek Testing Services Shenzhen Ltd. Longhua Branch** and located at 101, 201, Building B, No. 308 Wuhe Avenue, Zhangkengjing Community, GuanHu Subdistrict, LongHua District, Shenzhen, P.R. China. This test facility and site measurement data have been fully placed on file with File Number: CN1188.

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. The EUT was powered by DC 5V 3A from adapter and DC 3.8V 5000mAh rechargeable Li-Ion Battery during the test.

For maximizing emissions, the EUT was rotated through 360°, the EUT was placed on the styrene turntable with 0.8m up to 1GHz and 1.5 m above 1GHz. 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.

The rear of unit was flushed with the rear of the table.

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 testing was designed to exercise the various system components in a manner similar to a typical use.

3.3 Special Accessories

No special accessory 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 YIBIN WEIHENG DIGITAL COMPANY LIMITED will be incorporated in each production model sold / leased in the United States.

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

3.6 Support Equipment List and Description

This product was tested in the following configuration:

Refer List:

Description	Manufacturer	Model No.
IPhone (Provided by Intertek)	Apple	A1303
AC Adapter (Provided by Applicant)	CY-Power	CYHA050300VWUL Input: 100-240Vac 50/60Hz Output: DC 5V,3.0A
Mini DHMI cable (Provided by Intertek)	/	Unshielded, 1m
Headset cable (Provided by Intertek)	/	Unshielded, 0.5m
USB cable (Provided by Applicant)	/	Unshielded, 0.1m
USB Memory 1 (Provided by Intertek)	/	SDCZ36-002G-P36
USB Memory 2 (Provided by Intertek)	/	SSK SFD010
Test TV (Provided by Intertek)	SONY	KDL-24EX520

EXHIBIT 4

MEASUREMENT RESULTS

Applicant: YIBIN WEIHENG DIGITAL COMPANY LIMITED
Date of Test: Jan. 02, 2019 Worst case Model: I101

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 broadband peak RF power meter. Power was read directly and cable loss correction was added to the reading to obtain power at the EUT antenna terminals.

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

Frequency (MHz)	Output in dBm (Peak reading)	Output in mWatt
Low Channel: 2402	9.14	8.20
Middle Channel: 2440	9.38	8.67
High Channel: 2480	9.31	8.53

Cable loss: 0.5 dB External Attenuation: 0 dB

Cable loss, external attenuation has been included in OFFSET function

EUT max. output power = 9.38 dBm
EUT max E.I.R.P = 9.38 dBm + (1.5dBi) = 10.88 dBm = 12.25mW

For RF Exposure, the information is saved with filename: SAR report.pdf.

Applicant: YIBIN WEIHENG DIGITAL COMPANY LIMITED
Date of Test: Jan. 02, 2019 Worst case Model: I101

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

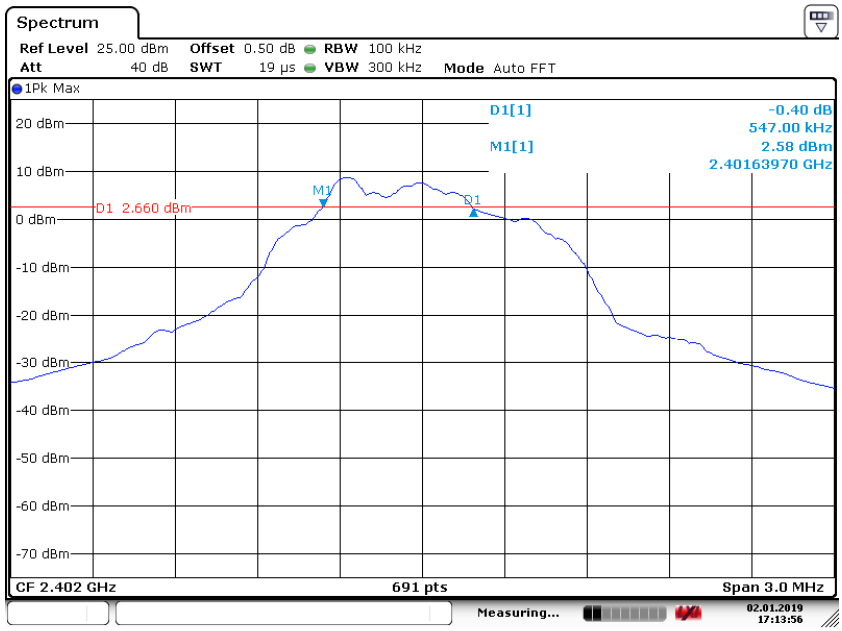
The antenna port of the EUT was connected to the input of a spectrum analyzer. Analyzer RBW was set to 100 KHz according to FCC KDB 558074 D01 v05. For each RF output channel investigated, the spectrum analyzer center frequency was set to the channel carrier. A PEAK output reading was taken, a DISPLAY line was drawn 6 dB lower than PEAK level. The 6dB bandwidth was determined from where the channel output spectrum intersected the display line.

Limit: The 6 dB Bandwidth is at least 500 kHz.

Frequency (MHz)	6 dB Bandwidth (KHz)
2402	547.0
2440	547.0
2480	547.0

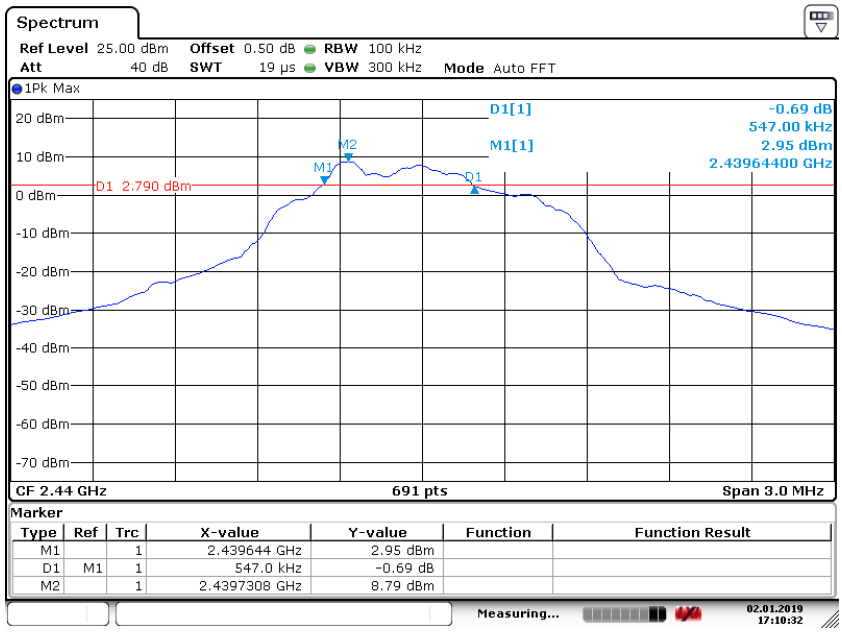
The test plots are attached as below.

Low Channel



Date: 2.JAN.2019 17:13:56

Middle Channel

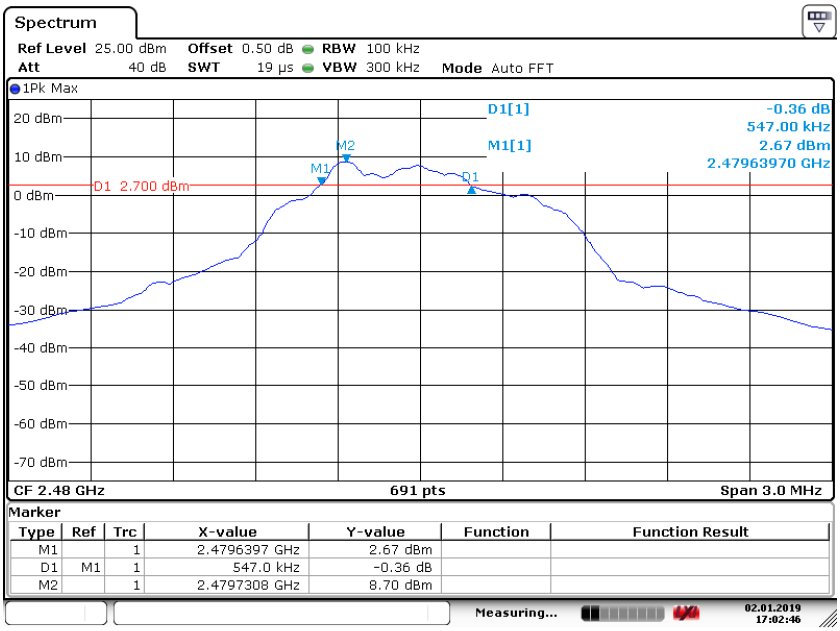


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.439644 GHz	2.95 dBm		
D1	M1	1	547.0 kHz	-0.69 dB		
M2		1	2.4397308 GHz	8.79 dBm		

Date: 2.JAN.2019 17:10:32

High Channel



Date: 2.JAN.2019 17:02:46

Applicant: YIBIN WEIHENG DIGITAL COMPANY LIMITED
Date of Test: Jan. 02, 2019 Worst case Model: I101

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

The Measurement Procedure PKPSD was set according to the FCC KDB 558074 D01 v05.

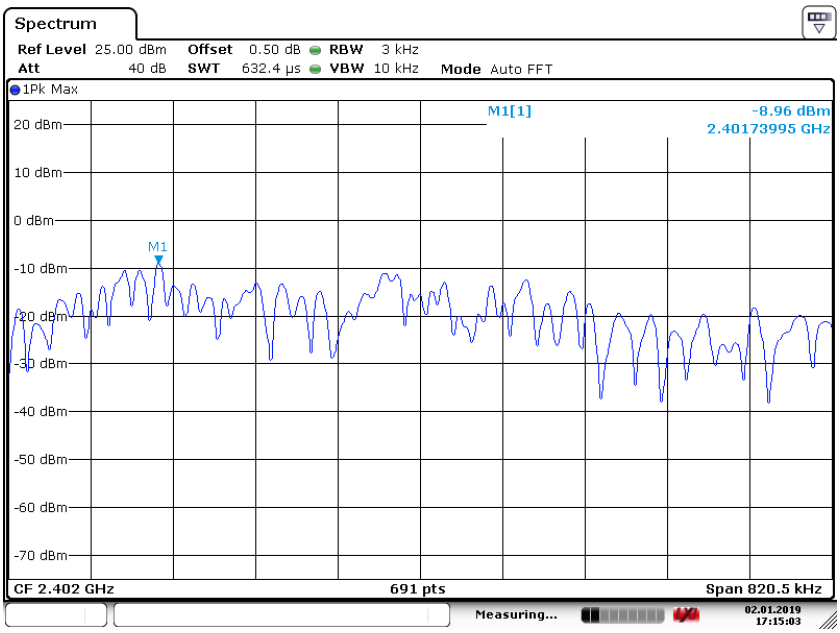
Antenna output of the EUT was coupled directly to spectrum analyzer; if an external attenuator and/or cable was used, these losses are compensated for with the analyzer OFFSET function.

Limit: The Power Density does not exceed 8dBm/3 kHz.

Frequency (MHz)	Power Density with RBW 3KHz
2402	-8.96
2440	-8.74
2480	-8.83

The test plots are attached as below.

Low Channel



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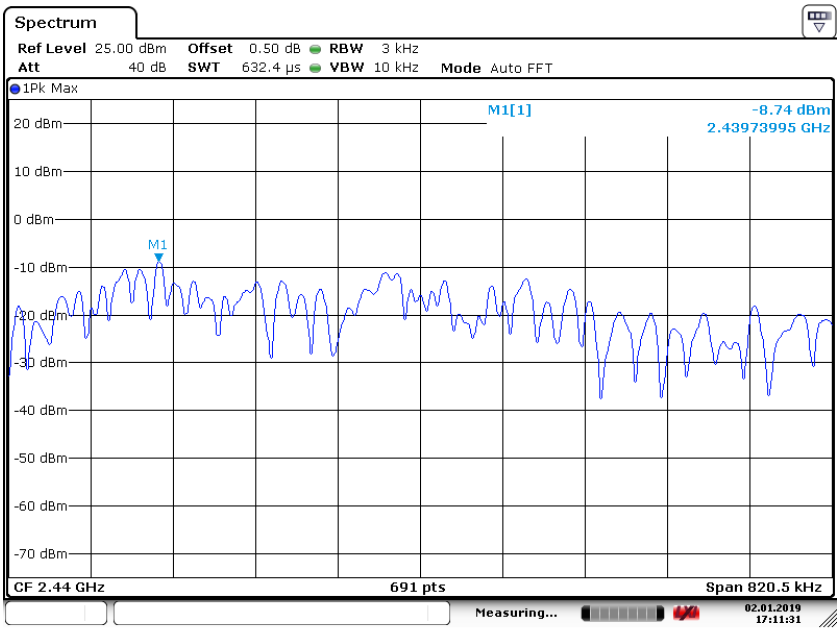
Middle Channel



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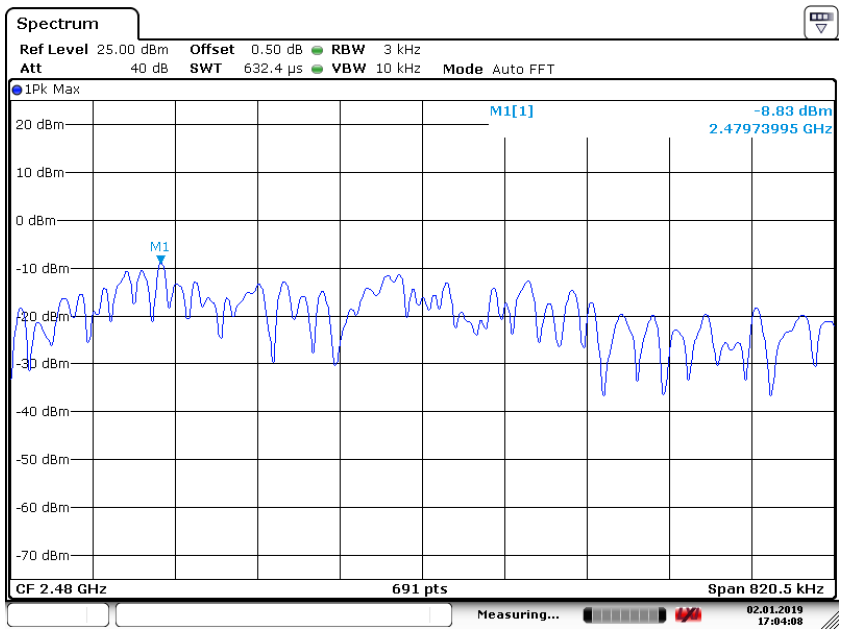
High Channel



Date: 2.JAN.2019 17:04:08

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. The Measurement Procedure was set according to the FCC KDB 558074 D01 v05.

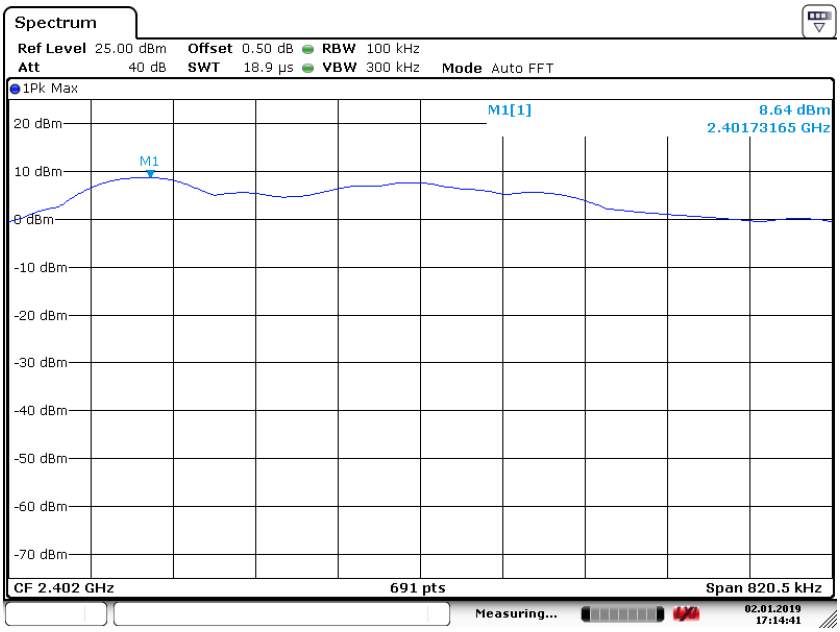
All other types of emissions from the EUT shall meet the general limits for radiated frequencies outside the passband.

Refer to the attached test plot for out of band conducted emissions data.

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

The test plots are attached as below.

Low Channel Reference Level: 8.64dBm



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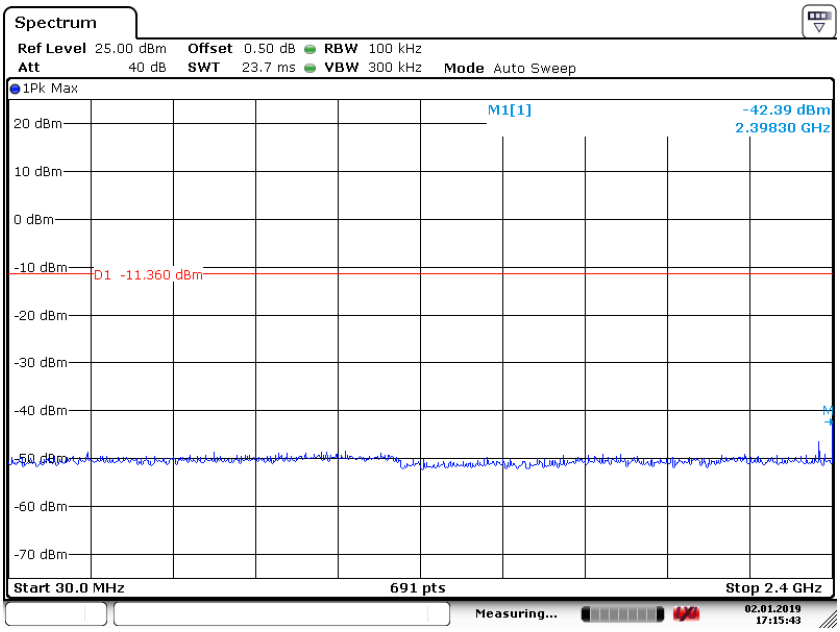

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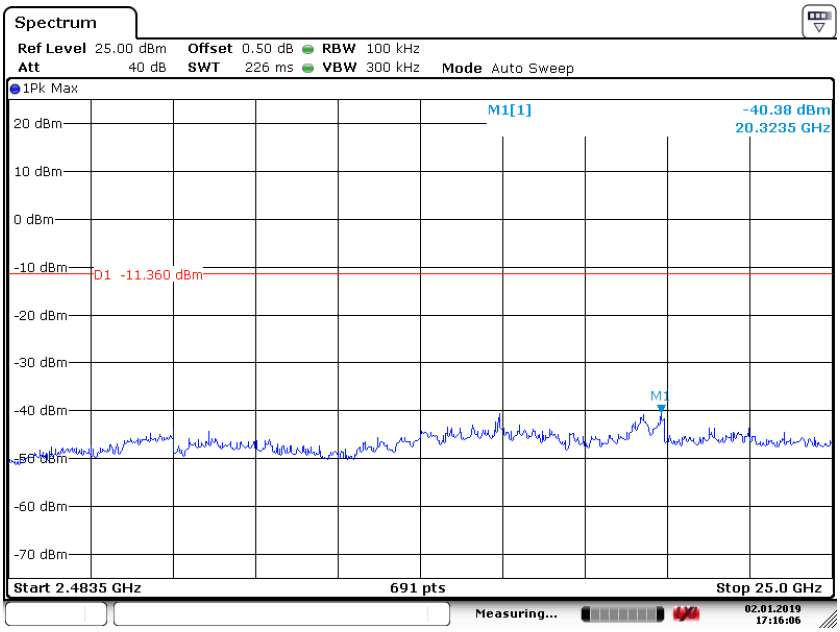

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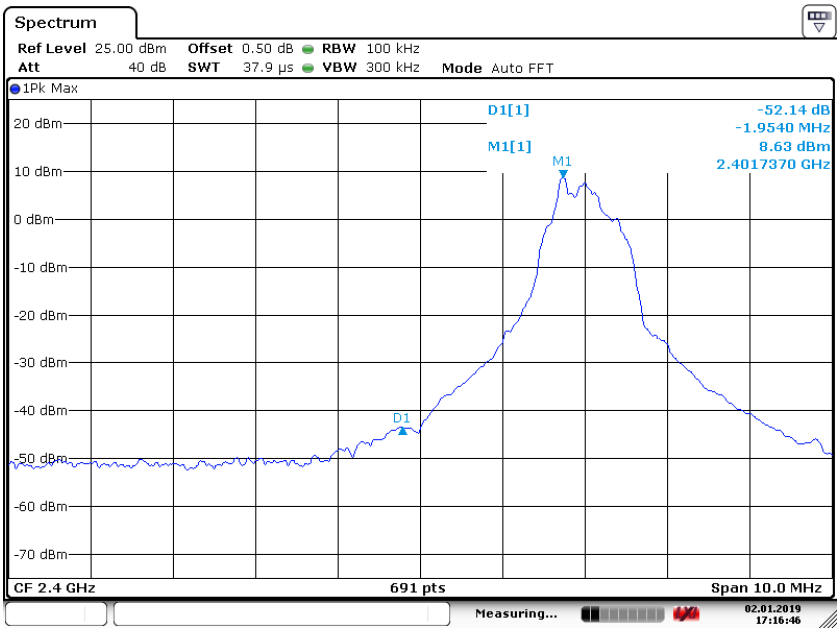

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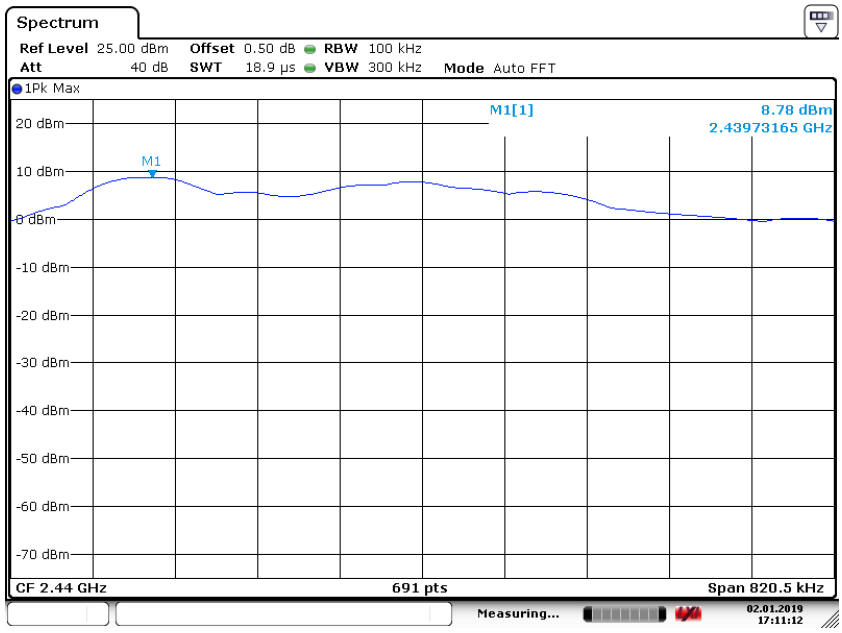
Middle Channel Reference Level: 8.78dBm



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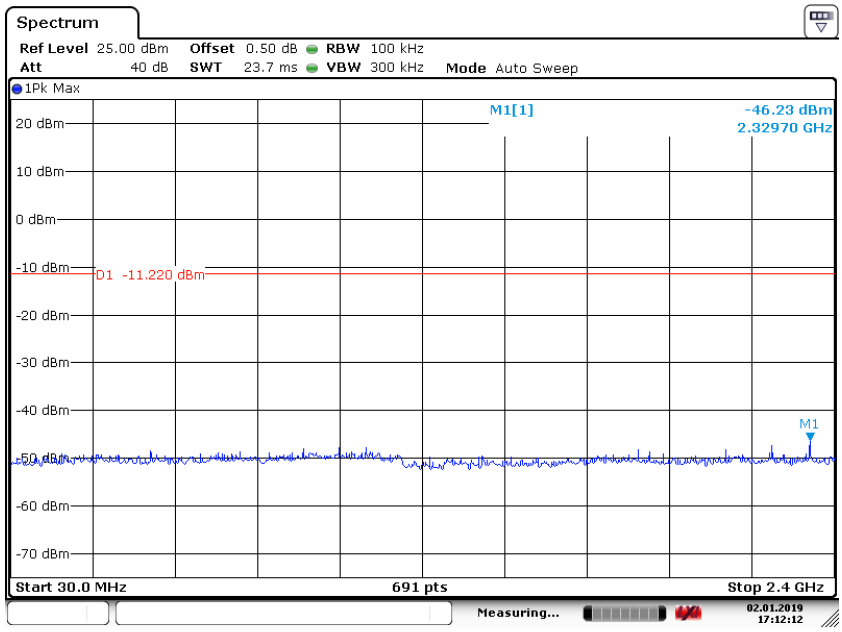

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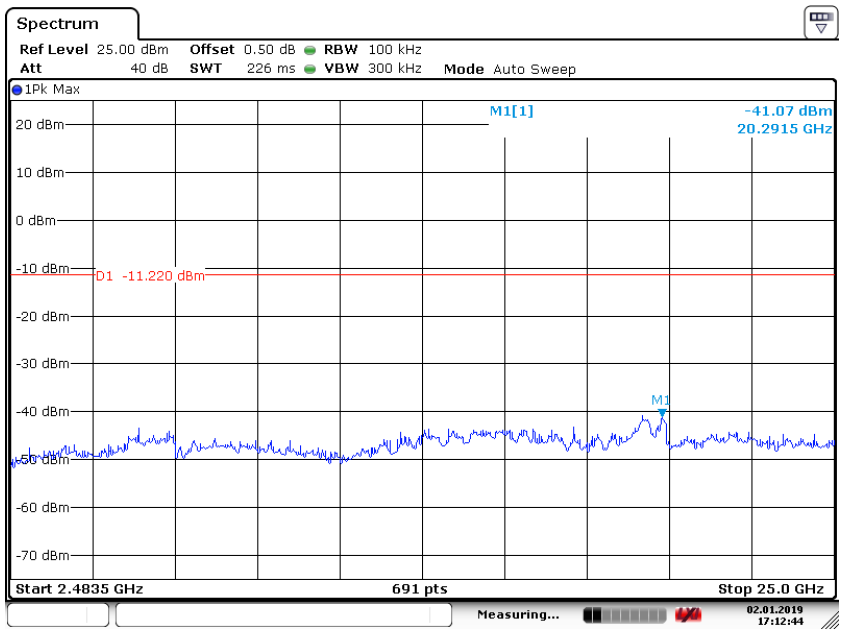

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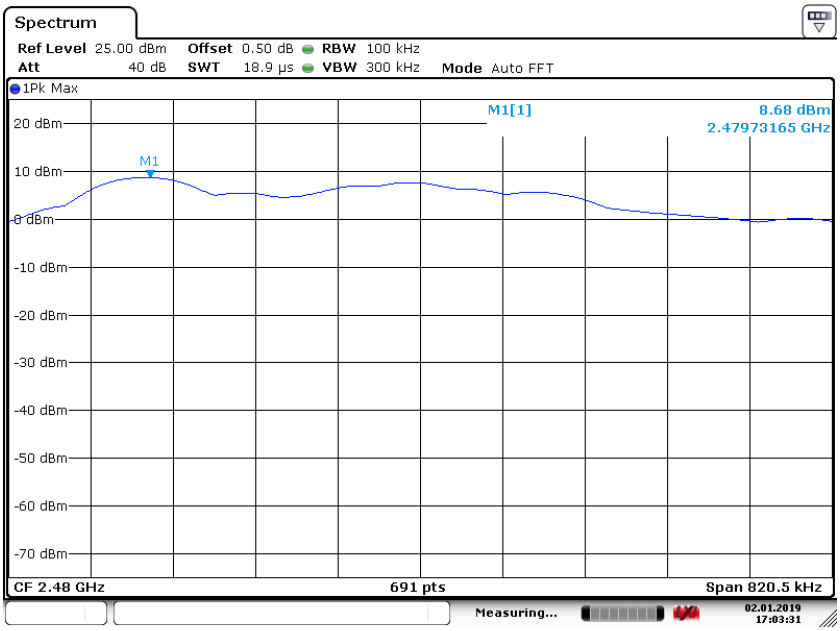
High Channel Reference Level: 8.68dBm



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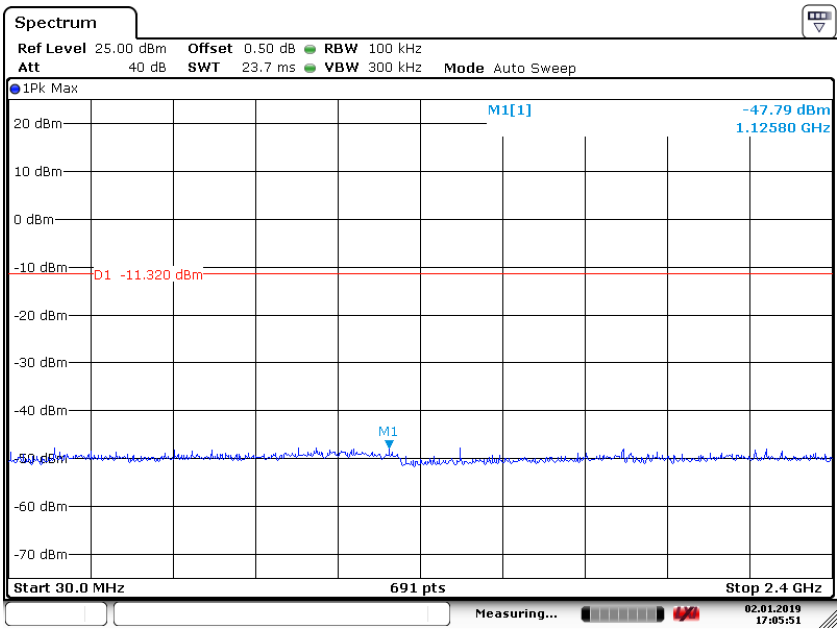

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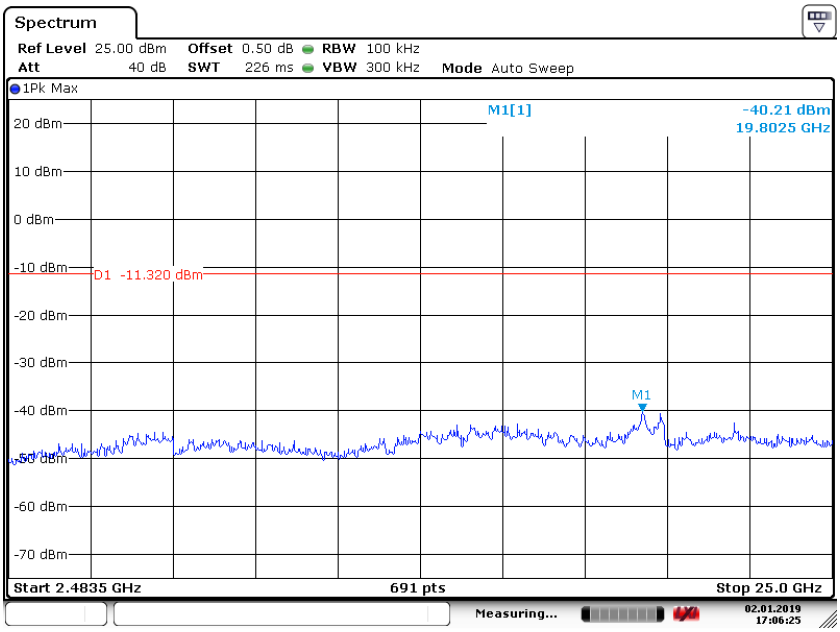

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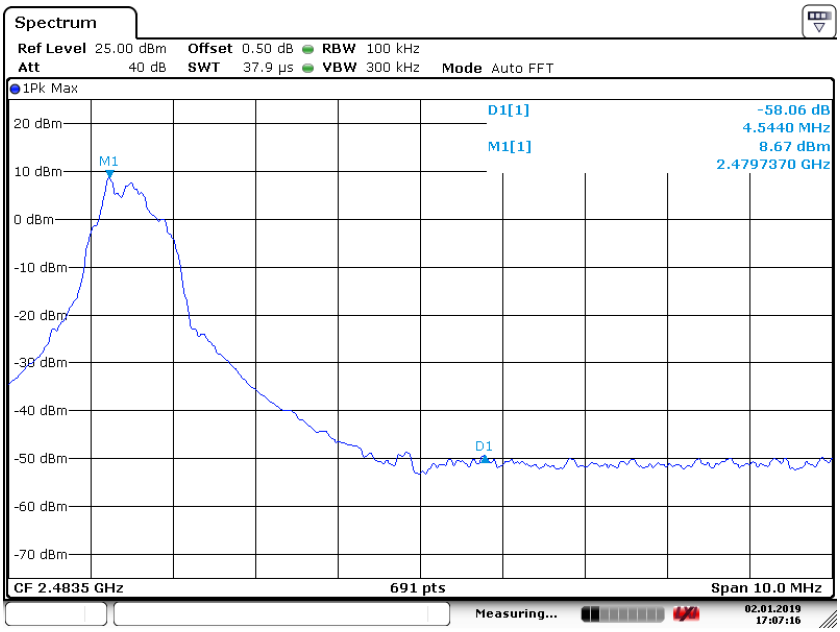


Date: 2.JAN.2019 17:07:16

Applicant: YIBIN WEIHENG DIGITAL COMPANY LIMITED
Date of Test: Jan. 02, 2019 Worst case Model: I101

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

Applicant: YIBIN WEIHENG DIGITAL COMPANY LIMITED
Date of Test: Jan. 02, 2019 Worst case Model: I101

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.

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

Where FS = Field Strength in dBμV/m
RA = Receiver Amplitude (including preamplifier) in dBμV
CF = Cable Attenuation Factor in dB
AF = Antenna Factor in dB
AG = Amplifier Gain in dB
PD = Pulse Desensitization 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

<u>Example</u>
Assume a receiver reading of 62.0 dBμV 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. The net field strength for comparison to the appropriate emission limit is 42 dBμV/m. This value in dBμV/m was converted to its corresponding level in μV/m.

RA = 62.0 dBμV
AF = 7.4 dB
CF = 1.6 dB
AG = 29.0 dB
PD = 0 dB
FS = 62 + 7.4 + 1.6 - 29 + 0 = 42 dBμV/m

Level in mV/m = Common Antilogarithm [(42 dBμV/m)/20] = 125.9 μV/m

4.7.1 Radiated Emission Configuration Photograph

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

4.7.2 Radiated Emissions- FCC section 15.209

The data on the following page lists the significant emission frequencies, the limit and the margin of compliance. Numbers with a minus sign are below the limit.

Worst Case Radiated Emission
at
30.295 MHz

Judgement: Passed by 3.9 dB

TEST PERSONNEL:

Sign on file

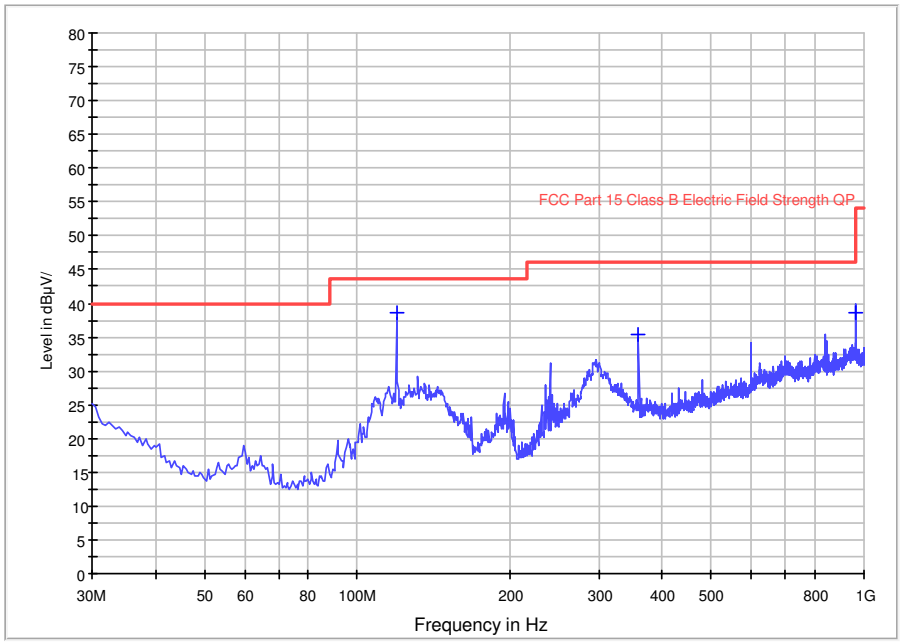
Joanna Jiao, Engineer
Typed/Printed Name

December 25, 2018
Date

Applicant: YIBIN WEIHENG DIGITAL COMPANY LIMITED
Date of Test: December 25, 2018
Worst case Model: I101
Worst Case Operating Mode: Transmitting(2402MHz)

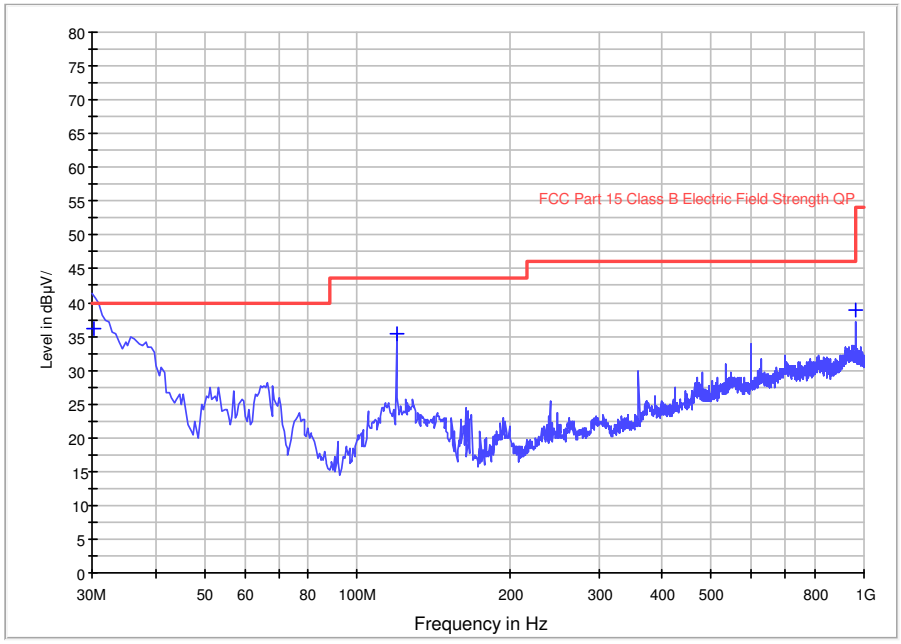
ANT Polarity: Horizontal

FCC Part 15



ANT Polarity: Vertical

FCC Part 15



Applicant: YIBIN WEIHENG DIGITAL COMPANY LIMITED
Date of Test: December 25, 2018
Worst case Model: I101
Worst Case Operating Mode: Transmitting(2402MHz)

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	120.019500	42.1	20.0	16.6	38.7	43.5	-4.8
Horizontal	359.800000	43.9	20.0	11.4	35.3	46.0	-10.7
Horizontal	960.230000	34.8	20.0	23.8	38.6	54.0	-15.4
Vertical	30.295000	39.5	20.0	16.6	36.1	40.0	-3.9
Vertical	120.020500	44.1	20.0	11.3	35.4	43.5	-8.1
Vertical	960.032000	33.6	20.0	25.3	38.9	54.0	-15.1

NOTES:
1. Quasi-Peak detector is used for frequency below 1GHz.
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.

4.7.3 Transmitter Spurious Emissions (Radiated) - FCC section 15.209

The data on the following page lists the significant emission frequencies, the limit and the margin of compliance. Numbers with a minus sign are below the limit.

Worst Case Radiated Emission

at 7440.000 MHz

Judgement: Passed by 14.2 dB

TEST PERSONNEL:

Sign on file

Joanna Jiao, Engineer
Typed/Printed Name

December 25, 2018
Date

Applicant: YIBIN WEIHENG DIGITAL COMPANY LIMITED
Date of Test: Jan. 02, 2019
Worst case Model: I101
Worst Case Operating Mode: TX-Channel 2402MHz

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	*2390.000	53.1	36.7	35.5	51.9	74.0	-22.1
Horizontal	*4804.000	52.0	36.1	36.5	52.4	74.0	-21.6

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	*2390.000	35.9	36.7	35.5	34.7	54.0	-19.3
Horizontal	*4804.000	33.4	36.1	36.5	33.8	54.0	-20.2

NOTES:

1. Peak detector is used, RBW=1MHz/VBW=3MHz for peak value and RBW=1MHz/VBW=10Hz for average value.

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.

Applicant: YIBIN WEIHENG DIGITAL COMPANY LIMITED
Date of Test: Jan. 02, 2019
Worst case Model: I101
Worst Case Operating Mode: TX-Channel 2440MHz

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	*4880.000	53.4	36.7	35.5	52.2	74.0	-21.8
Horizontal	*7320.000	54.8	36.1	36.5	55.2	74.0	-18.8

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	*4880.000	35.0	36.7	35.5	33.8	54.0	-20.2
Horizontal	*7320.000	38.8	36.1	36.5	39.2	54.0	-14.8

NOTES:
1. Peak detector is used, RBW=1MHz/VBW=3MHz for peak value and RBW=1MHz / VBW=10Hz for average value.
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.

Applicant: YIBIN WEIHENG DIGITAL COMPANY LIMITED
Date of Test: Jan. 02, 2019
Worst case Model: I101
Worst Case Operating Mode: TX-Channel 2480MHz

Radiated Emissions

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Peak Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	*4960.000	53.5	36.7	35.5	52.3	74.0	-21.7
Horizontal	*7440.000	55.0	36.1	36.5	55.4	74.0	-18.6

Polarization	Frequency (MHz)	Reading (dBµV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBµV/m)	Average Limit at 3m (dBµV/m)	Margin (dB)
Horizontal	*4960.000	35.1	36.7	35.5	33.9	54.0	-20.1
Horizontal	*7440.000	39.4	36.1	36.5	39.8	54.0	-14.2

NOTES:

1. Peak detector is used, RBW=1MHz/VBW=3MHz for peak value and RBW=1MHz / VBW=10Hz for average value.

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.

Applicant: YIBIN WEIHENG DIGITAL COMPANY LIMITED
Date of Test: Jan. 02, 2019
Model: I101

4.8 Conducted Emission at Mains Terminal

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

Worst Case Conducted Configuration

at 0.442 MHz

Judgement: Passed by 10.1 dB margin

TEST PERSONNEL:

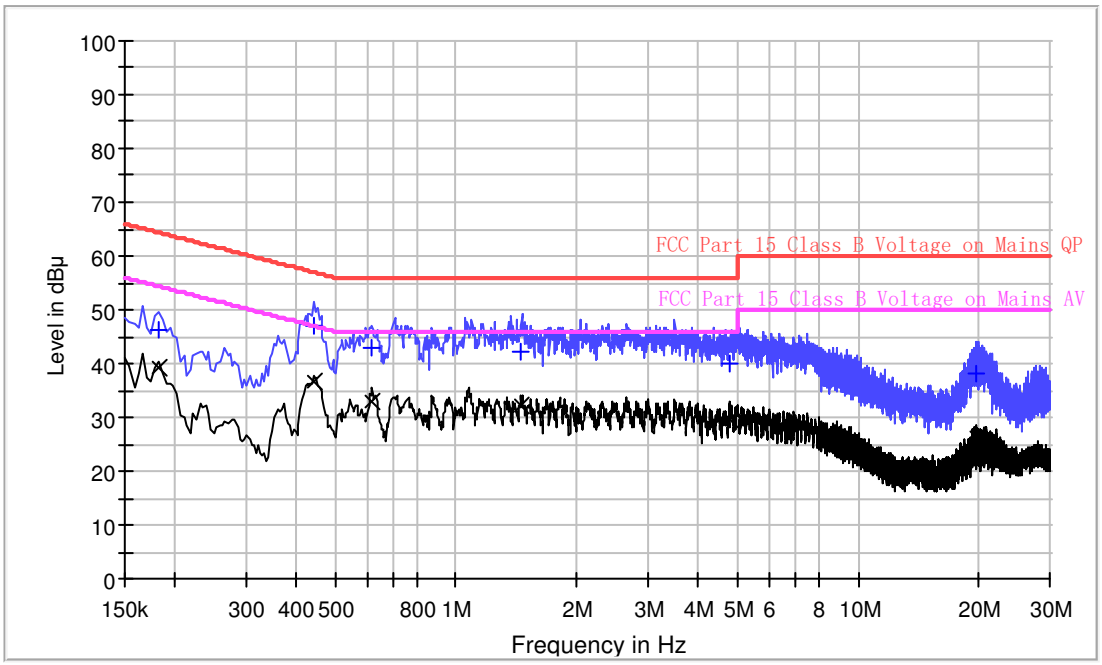
Sign on file

Joanna Jiao, Engineer
Typed/Printed Name

December 25, 2018
Date

Applicant: YIBIN WEIHENG DIGITAL COMPANY LIMITED
Model: I101
Worst Case Operating Mode: Charging+BT Link
Phase: Live

Conducted Emission Test - FCC



Result Table QP

Frequency (MHz)	QuasiPeak (dB¦ÌV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dB¦ÌV)
0.182000	46.2	9.000	L1	9.6	18.2	64.4
0.442000	46.9	9.000	L1	9.6	10.1	57.0
0.618000	43.0	9.000	L1	9.7	13.0	56.0
1.450000	42.3	9.000	L1	9.7	13.7	56.0
4.782000	40.0	9.000	L1	9.7	16.0	56.0
19.598000	38.0	9.000	L1	10.4	22.0	60.0

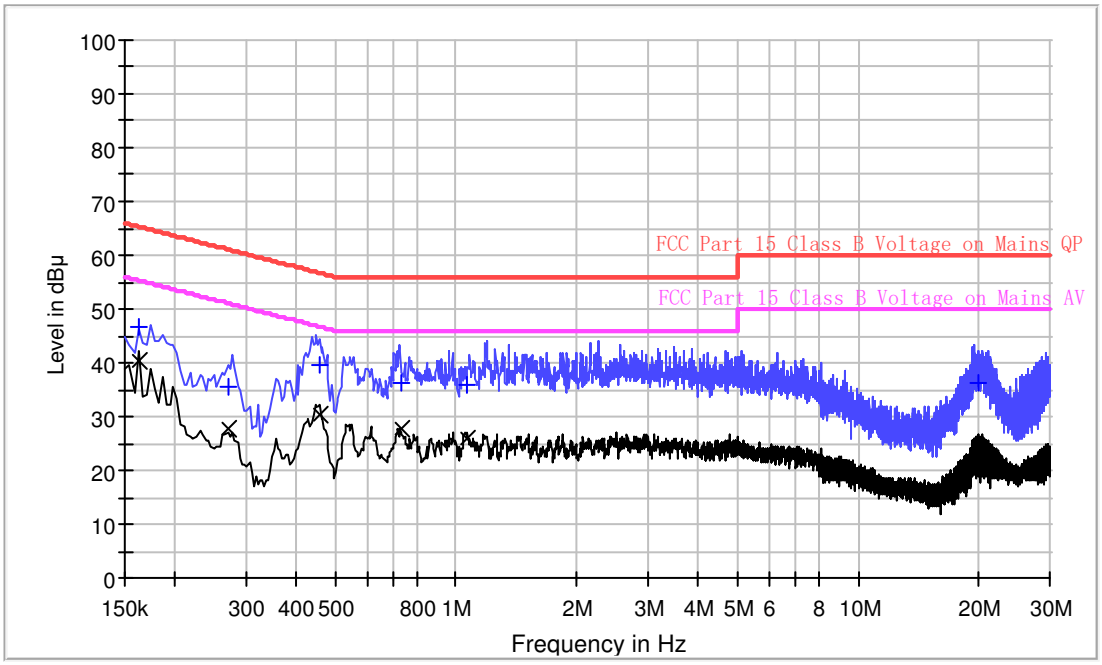
Result Table AV

Frequency (MHz)	Average (dB¦ÌV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dB¦ÌV)
0.182000	39.3	9.000	L1	9.6	15.1	54.4
0.442000	36.8	9.000	L1	9.6	10.2	47.0
0.618000	33.1	9.000	L1	9.7	12.9	46.0
1.450000	32.2	9.000	L1	9.7	13.8	46.0
4.782000	29.6	9.000	L1	9.7	16.4	46.0
19.598000	26.3	9.000	L1	10.4	23.7	50.0

Remark:
1. Corr. Factor (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Margin (dB) = Limit (dBuV) – Level (dBuV)

Applicant: YIBIN WEIHENG DIGITAL COMPANY LIMITED
Model: I101
Worst Case Operating Mode: Charging+BT Link
Phase: Neutral

Conducted Emission Test - FCC



Result Table QP

Frequency (MHz)	QuasiPeak (dB¦ÌV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dB¦ÌV)
0.162000	46.6	9.000	N	9.6	18.8	65.4
0.270000	35.4	9.000	N	9.6	25.7	61.1
0.458000	39.8	9.000	N	9.7	16.9	56.7
0.730000	36.4	9.000	N	9.7	19.6	56.0
1.070000	35.9	9.000	N	9.7	20.1	56.0
19.906000	36.4	9.000	N	10.2	23.6	60.0

Result Table AV

Frequency (MHz)	Average (dB¦ÌV)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dB¦ÌV)
0.162000	40.3	9.000	N	9.6	15.1	55.4
0.270000	27.8	9.000	N	9.6	23.3	51.1
0.458000	30.5	9.000	N	9.7	16.2	46.7
0.730000	27.6	9.000	N	9.7	18.4	46.0
1.070000	25.8	9.000	N	9.7	20.2	46.0
19.906000	24.1	9.000	N	10.2	25.9	50.0

Remark:
1. Corr. Factor (dB) = LISN Factor (dB) + Cable Loss (dB)
2. Margin (dB) = Limit (dBuV) – Level (dBuV)

Applicant: YIBIN WEIHENG DIGITAL COMPANY LIMITED
Date of Test: 25 December, 2018
Model: I101

4.9 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 report.

Applicant: YIBIN WEIHENG DIGITAL COMPANY LIMITED
Date of Test: 25 December, 2018
Model: I101

4.10 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.

EXHIBIT 5

EQUIPMENT PHOTOGRAPHS

5.0 Equipment Photographs

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

EXHIBIT 6

PRODUCT LABELLING

6.0 Product Labeling

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

EXHIBIT 7

TECHNICAL SPECIFICATIONS

7.0 Technical Specifications

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

EXHIBIT 8

INSTRUCTION MANUAL

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.

EXHIBIT 9

CONFIDENTIALITY REQUEST

9.0 Confidentiality Request

For electronic filing, the confidentiality request of the tested EUT is saved with filename: request.pdf.

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EXHIBIT 10

MISCELLANEOUS INFORMATION

10.0 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.

EXHIBIT 11

TEST EQUIPMENT LIST

11.0 Test Equipment List

Equipment No.	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due Date
SZ182-02	RF Power Meter	Anritsu	ML2496A	1302005	5-Jun-2018	5-Jun-2019
SZ182-02-01	Power Sensor	Anritsu	MA2411B	1207429	5-Jun-2018	5-Jun-2019
SZ061-12	BiConiLog Antenna	ETS	3142E	00166158	14-Sep-2018	14-Sep-2019
SZ185-01	EMI Receiver	R&S	ESCI	100547	24-Jan-2018	24-Jan-2019
SZ061-08	Horn Antenna	ETS	3115	00092346	14-Sep-2018	14-Sep-2019
SZ061-07	Pyramidal Horn Antenna	ETS	3160-09	00083067	17-Mar-2018	17-Mar-2019
SZ061-06	Active Loop Antenna	Electro-Metrics	EM-6876	217	11-May-2018	11-May-2019
SZ056-03	Spectrum Analyzer	R&S	FSP 30	101148	05-Jun-2018	05-Jun-2019
SZ056-06	Signal Analyzer	R&S	FSV 40	101101	05-Jun-2018	05-Jun-2019
SZ181-04	Preamplifier	Agilent	8449B	3008A02474	24-Jan-2018	24-Jan-2019
SZ188-01	Anechoic Chamber	ETS	RFD-F/A-100	4102	16-Jan-2017	16-Jan-2019
SZ062-02	RF Cable	RADIALL	RG 213U	--	02-Jun-2018	02-Jun-2019
SZ062-05	RF Cable	RADIALL	0.04-26.5GHz	--	02-Jun-2018	02-Jun-2019
SZ062-12	RF Cable	RADIALL	0.04-26.5GHz	--	02-Jun-2018	02-Jun-2019
SZ067-04	Notch Filter	Micro-Tronics	BRM50702-02	--	05-Jun-2018	05-Jun-2019
SZ185-02	EMI Test Receiver	R&S	ESCI	100692	26-Oct-2018	26-Oct-2019
SZ187-01	Two-Line V-Network	R&S	ENV216	100072	26-Oct-2018	26-Oct-2019
SZ187-02	Two-Line V-Network	R&S	ENV216	100073	04-Jul-2018	04-Jul-2019
SZ188-03	Shielding Room	ETS	RFD-100	4100	16-Jan-2017	16-Jan-2019

********** End of Report**********