

Shenzhen Jingwah Information Technology Co., Ltd.

Application For Certification

FCC ID: RBD-M710GZ

Tablet PC

Model: M710GZ Additional models: ST7, ST7-D

2.4GHz Transceiver

Report No.: 150717001SZN-002

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 [10-1-13]

Prepared and Checked by: Approved by:

Sign on file

Robert Li
Project Engineer

Andy Yan
Senior Pro

Senior Project Engineer Date: August 12, 2015

- 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_TX_b

6F, D Block, Huahan Building, Langshan Road, Nanshan District, Shenzhen, P. R. China

Tel: (86 755) 8601 6288 Fax: (86 755) 8601 6751 Website: www.china.intertek-etlsemko.com

LIST OF EXHIBITS

INTRODUCTION

EXHIBIT 1: General Description

EXHIBIT 2: System Test Configuration

EXHIBIT 3: Emission Results

EXHIBIT 4: Equipment Photographs

EXHIBIT 5: Product Labelling

EXHIBIT 6: Technical Specifications

EXHIBIT 7: Instruction Manual

EXHIBIT 8: Miscellaneous Information

EXHIBIT 9: Confidentiality Request

EXHIBIT 10: Test Equipment List

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

MEASUREMENT/TECHNICAL REPORT

Shenzhen Jingwah Information Technology Co., Ltd. Model: M710GZ Additional models: ST7, ST7-D

FCC ID: RBD-M710GZ

This report concerns (check one :)	Original Grant <u>X</u>	Class II Change
Equipment Type: DXX - Part 15 Low Pow	er Communication Devi	ce Transmitter
Deferred grant requested per 47 CFR 0.4	57(d)(1)(ii)? Yes	s No _X_
	If yes, defer until	: date
Company Name agrees to notify the Com	mission by:	
of the intended date of announcement of date.	the product so that the	date grant can be issued on that
Transition Rules Request per 15.37?	Yes	s No <u>X</u>
If no, assumed Part 15, Subpart C for Edition] provision.	intentional radiator -	the new 47 CFR [10-1-13
Report prepared by:		
	Robert Li Intertek Testing Servic Kejiyuan Branch 6F, Block D, Huahan I Nanshan District, She Phone: (86 755) 860 Fax: (86 755) 860	Building, Langshan Road, nzhen, P. R. China 1 0657

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

Table of Contents

1.0 General Description	2
1.1 Product Description	2
1.2 Related Submittal(s) Grants	2
1.3 Test Methodology	
1.4 Test Facility	
2.0 System Test Configuration	5
2.1 Justification	
2.2 EUT Exercising Software	5
2.3 Special Accessories	
2.4 Equipment Modification	
2.5 Measurement Uncertainty	6
2.6 Support Equipment List and Description	6
3.0 Emission Results	8
3.1Radiated Test Results	9
3.1.1 Field Strength Calculation	9
3.1.2 Radiated Emission Configuration Photograph	10
3.1.3 Radiated Emissions	
3.1.4 Transmitter Spurious Emissions (Radiated)	12
3.2 Conducted Emission at Mains Terminal	16
3.2.1 Conducted Emissions Configuration Photograph	16
3.2.2 Conducted Emissions	16
4.0 Equipment Photographs	20
5.0 Product Labelling	22
5.0 <u>Froduct Labelling</u>	∠∠
6.0 Technical Specifications	24
0.0 <u>reclinical Specifications</u>	
7.0 Instruction Manual	26
7.0 <u>Instruction Manual</u>	20
8.0 Miscellaneous Information	28
8.1 20dB BW Plot	
8.2 Discussion of Pulse Desensitizatio	_
8.3 Emissions Test Procedures	
3.5 Emissions 15501 155044155	
9.0 Confidentiality Request	34
<u> </u>	
10.0 Test Equipment List	36

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

List of attached file

Exhibit type	File Description	Filename
Test Report	Test Report	report.pdf
Test Setup Photo	Radiated Emission	radiated photos.pdf
Test Setup Photo	Conducted Emission	conducted photos.pdf
Test Report	20dB BW Plot	bw.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
Cover Letter	Letter of Agency	agency.pdf

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

EXHIBIT 1 GENERAL DESCRIPTION

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

1.0 **General Description**

1.1 Product Description

The equipment under test (EUT) is a Tablet PC, it can transmit data through Bluetooth (4.0) function operating at 2402-2480MHz. The EUT can be powered by 3.7 VDC Li-ion rechargeable battery and charged by USB port. For more detail information pls. refer to the user manual.

The models ST7, ST7-D are same as the model M710GZ in hardware and electronic aspect. The models difference is color and silk-screen only.

Bluetooth Version: 4.0 BLE mode Antenna Type: Integral antenna

Modulation Type: GFSK

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

descri.pdf.

1.2 Related Submittal(s) Grants

This is an application for certification of BT 4.0 BLE portion for the tablet PC, and other radio function as below

Bluetooth 3.0+EDR: refer to the report 150717001SZN-003 2.4GHz WiFi b/g/n-HT20/n-HT40: refer to the report 150717001SZN-001 Other Digital function: refer to the report 150717001SZN-004

1.3 Test Methodology

Both AC mains line-conducted and radiated emission measurements were performed according to the procedures in ANSI C63.10 (2013). 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.

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

1.4 Test Facility

The Semi-anechoic chamber and shielding room used to collect the radiated data and conducted data are **Intertek Testing Services Shenzhen Ltd. Kejiyuan Branch** and located at 6F, D Block, 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(Registration Number: 242492).

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

EXHIBIT 2 SYSTEM TEST CONFIGURATION

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

2.0 **System Test Configuration**

2.1 Justification

The system was configured for testing in a typical fashion (as a customer would normally use it), and in the confines as outlined in ANSI C63.10 (2013).

The EUT was powered by a 3.7 VDC fully charged Li-ion rechargeable battery which is charged by an USB Power Adapter with AC 120V, 60Hz input during the test.

For maximizing emissions, the EUT was rotated through 360°, the antenna height was varied from 1 meter to 4 meters above the ground plane, and the antenna polarization was changed. This step by step procedure for maximizing emissions led to the data reported in Exhibit 3.

The rear of unit shall be flushed with the rear of the table.

The equipment under test (EUT) was configured for testing in a typical fashion (as a customer would normally use it). The EUT was placed on a turn table, which enabled the engineer to maximize emissions through its placement in the three orthogonal axes.

2.2 EUT Exercising Software

The EUT engineering mode (provided by client) used during testing as similar to a typical use.

2.3 Special Accessories

110cm shielded USB Cable was used during test.

2.4 Equipment Modification

Any modifications installed previous to testing by Shenzhen Jingwah Information Technology 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.

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

2.5 Measurement Uncertainty

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

2.6 Support Equipment List and Description

Description	Manufacturer	Model No.
110cm shielded USB Cable	N/A	N/A
USB Power Adapter	Tp Link	JXAS0050500100VU Input: AC 100-240V; 50/60Hz Output: DC 5V; 1000mA
120cm, Un-Shielded Head Phone	N/A	N/A
TF Card	SanDisk	BE0934314559D

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

EXHIBIT 3 EMISSION RESULTS

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

3.0 **Emission Results**

Data is included 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.

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

3.1 Radiated Test Results

A sample calculation, configuration photographs and data tables of the emissions are included.

3.1.1 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 $FS = Field Strength in dB\mu V/m$

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:

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. The net field strength for comparison to the appropriate emission limit is 42 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 dB

 $FS = 62 + 7.4 + 1.6 - 29 + 0 = 42 \, dB\mu V/m$

Level in μ V/m = Common Antilogarithm [(42 dB μ V/m)/20] = 125.9 μ V/m

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

3.1.2 Radiated Emission Configuration Photograph

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

3.1.3 Radiated Emissions

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 736.506 MHz

Judgement: Passed by 3.6 dB

TEST PERSONNEL:

Sign on file

Robert Li Project Engineer
Typed/Printed Name

July 21, 2015 Date

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

Applicant: Shenzhen Jingwah Information Technology Co., Ltd

Model: M710GZ Sample: 1/1

Worst Case Operating Mode: Transmit with charging

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	103.720	47.5	20.0	10.0	37.5	43.5	-6.0
Horizontal	259.890	44.8	20.0	15.1	39.9	46.0	-6.1
Horizontal	736.506	43.7	20.0	18.7	42.4	46.0	-3.6
Vertical	53.765	37.9	20.0	9.3	27.2	40.0	-12.8
Vertical	368.045	44.5	20.0	9.8	34.3	46.0	-11.7
Vertical	737.130	49.9	20.0	9.1	39.0	46.0	-7.0

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.

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

3.1.4 Transmitter Spurious Emissions (Radiated)

Worst Case Radiated Emission at 9768MHz MHz

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

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.

Judgement: Passed by 8.3 dB

TEST PERSONNEL:

Sign on file

Robert Li Project Engineer
Typed/Printed Name

July 21, 2015 Date

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

Applicant: Shenzhen Jingwah Information Technology Co., Ltd

Model: M710GZ Sample: 1/1

Worst Case Operating Mode: Transmitting

Table 2

Radiated Emissions

(2402MHz)

Polarization	Frequency	Reading	Pre-	Antenna	Net	Peak Limit	Margin
	(MHz)	(dBµV)	Amp	Factor	at 3m	at 3m	(dB)
	,	(Gain	(dB)	(dBµV/m)	(dBµV/m)	()
			(dB)	, ,			
Vertical	2402.000	102.0	36.7	28.5	93.8	114.0	-20.2
Vertical	4804.000	52.5	36.7	35.0	50.8	74.0	-23.2
Vertical	7206.000	57.0	36.1	37.0	57.9	74.0	-16.1
Vertical	2399.136	67.9	36.7	28.5	59.7	74.0	-14.3

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)				
Vertical	2402.000	85.9	36.7	28.5	77.7	94.0	-16.3
Vertical	4804.000	37.6	36.7	35.0	35.9	54.0	-18.1
Vertical	7206.000	41.4	36.1	37.0	42.3	54.0	-11.7
Vertical	2399.136	53.1	36.7	28.5	44.9	54.0	-9.1

- Notes: 1. Peak detector is used, RBW=1MHz/VBW=3MHz used for peak value and RBW=1MHz / VBW=10Hz for average value, RBW 3MHz used for fundamental emission.
 - 2. All measurements were made at 3 meter. Harmonic 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 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. Horn antenna is used for the emission over 1000MHz.

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

Applicant: Shenzhen Jingwah Information Technology Co., Ltd

Model: M710GZ Sample: 1/1

Worst Case Operating Mode: Transmitting

Table 3

Radiated Emissions

(2442MHz)

	1						
Polarization	Frequency	Reading	Pre-	Antenna	Net	Peak Limit	Margin
	(MHz)	(dBµV)	Amp	Factor	at 3m	at 3m	(dB)
	,	\ \ ' /	Gain	(dB)	(dBµV/m)	(dBµV/m)	,
			(dB)				
Vertical	2442.000	102.7	36.7	28.5	94.5	114.0	-19.5
Vertical	4884.000	52.6	36.7	35.0	50.9	74.0	-23.1
Vertical	7326.000	56.0	36.1	37.0	56.9	74.0	-17.1
Vertical	9768.000	58.4	36.2	38.0	60.2	74.0	-13.8

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)				
Vertical	2442.000	86.5	36.7	28.5	78.3	94.0	-15.7
Vertical	4884.000	37.4	36.7	35.0	35.7	54.0	-18.3
Vertical	7326.000	41.1	36.1	37.0	42.0	54.0	-12.0
Vertical	9768.000	43.9	36.2	38.0	45.7	54.0	-8.3

- Notes: 1. Peak detector is used, RBW=1MHz/VBW=3MHz used for peak value and RBW=1MHz / VBW=10Hz for average value, RBW 3MHz used for fundamental emission.
 - 2. All measurements were made at 3 meter. Harmonic 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 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. Horn antenna is used for the emission over 1000MHz.

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

Applicant: Shenzhen Jingwah Information Technology Co., Ltd

Model: M710GZ Sample: 1/1

Worst Case Operating Mode: Transmitting

Table 4

Radiated Emissions

(2480MHz)

Polarization	Frequency	Reading	Pre-	Antenna	Net	Limit	Margin
	(MHz)	(dBµV)	Amp	Factor	at 3m	at 3m	(dB)
			Gain	(dB)	(dBµV/m)	(dBµV/m)	
			(dB)				
Vertical	2480.000	102.9	36.7	28.3	94.5	114.0	-19.5
Vertical	4960.000	52.4	36.7	35.3	51.0	74.0	-23.0
Vertical	7440.000	56.5	36.1	37.0	57.4	74.0	-16.6
Vertical	2484.600	68.2	36.7	28.3	59.8	74.0	-14.2

Polarization	Frequency	Reading	Pre-	Antenna	Net	Average Limit	Margin
	(MHz)	(dBµV)	Amp	Factor	at 3 m	at 3m	(dB)
			Gain	(dB)	(dBµV/m)	(dBµV/m)	
			(dB)				
Vertical	2480.000	86.7	36.7	28.3	78.3	94.0	-15.7
Vertical	4960.000	37.2	36.7	35.3	35.8	54.0	-18.2
Vertical	7440.000	41.3	36.1	37.0	42.2	54.0	-11.8
Vertical	2484.600	53.6	36.7	28.3	45.2	54.0	-8.8

- Notes: 1. Peak detector is used, RBW=1MHz/VBW=3MHz used for peak value and RBW=1MHz / VBW=10Hz for average value, RBW 3MHz used for fundamental emission.
 - 2. All measurements were made at 3 meter. Harmonic 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 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. Horn antenna is used for the emission over 1000MHz.

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

- 3.2 Conducted Emission at Mains Terminal
- 3.2.1 Conducted Emissions Configuration Photograph

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

3.2.2 Conducted Emissions

Worst Case Conducted Configuration
At

0.159 MHz

Judgement: Passed by 5.8 dB margin

TEST PERSONNEL:

Sign on file

Robert Li Project Engineer
Typed/Printed Name

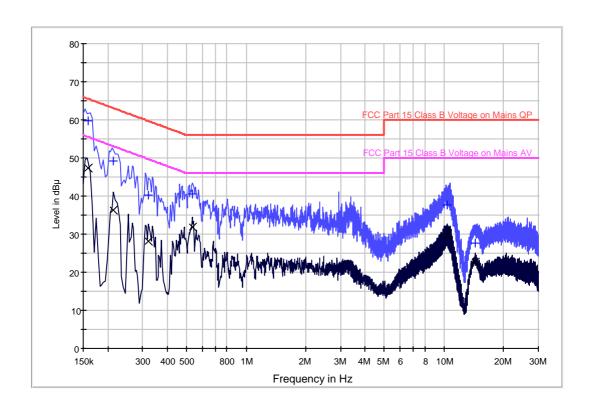
July 23, 2015 Date

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

Applicant: Shenzhen Jingwah Information Technology Co., Ltd

Model: M710GZ Sample: 1/1

Worst Case Operating Mode: Transmit with charging



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dB µ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB µ V)
0.159000	59.7	L1	9.8	5.8	65.5
0.214000	49.3	L1	9.8	13.7	63.0
0.322000	40.2	L1	9.9	19.5	59.7
0.534000	40.6	L1	9.9	15.4	56.0
10.394000	37.5	L1	10.1	22.5	60.0
14.398000	27.6	L1	10.1	32.4	60.0

Limit and Margin AV

Frequency	Average	Line	Corr.	Margin	Limit
(MHz)	(dB µ V)		(dB)	(dB)	(dB µ V)
0.159000	47.4	L1	9.8	8.1	55.5
0.214000	36.2	L1	9.8	16.8	53.0
0.322000	28.2	L1	9.9	21.5	49.7
0.534000	31.9	L1	9.9	14.1	46.0
10.394000	29.9	L1	10.1	20.1	50.0
14.398000	22.6	L1	10.1	27.4	50.0

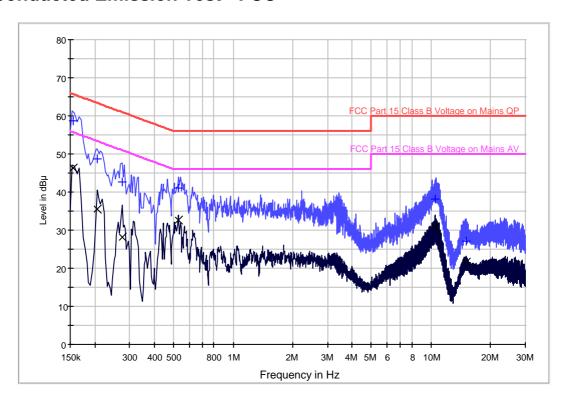
TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

Applicant: Shenzhen Zoko Industry Development Co.,Ltd

Model: M710GZ Sample: 1/1

Worst Case Operating Mode: Transmit with charging

Conducted Emission Test - FCC



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dB μ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB µ V)
0.154500	58.7	N	10.2	7.1	65.8
0.206000	48.7	N	10.1	14.7	63.4
0.274000	42.7	N	10.2	18.3	61.0
0.526000	40.9	N	10.2	15.1	56.0
10.538000	38.2	N	10.4	21.8	60.0
15.010000	27.2	N	10.3	32.8	60.0

Limit and Margin AV

Frequency	Average	erage Line		Margin	Limit
(MHz)	(dB µ V)		(dB)	(dB)	(dB µ V)
0.154500	46.3	N	10.2	9.5	55.8
0.206000	35.6	N	10.1	17.8	53.4
0.274000	28.1	N	10.2	22.9	51.0
0.526000	32.6	N	10.2	13.4	46.0
10.538000	30.8	N	10.4	19.2	50.0
15.010000	21.5	N	10.3	28.5	50.0

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

EXHIBIT 4

EQUIPMENT PHOTOGRAPHS

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

4.0 **Equipment Photographs**

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

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

EXHIBIT 5 PRODUCT LABELLING

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

5.0 **Product Labelling**

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

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

EXHIBIT 6 TECHNICAL SPECIFICATIONS

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

6.0 <u>Technical Specifications</u>

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

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

EXHIBIT 7 INSTRUCTION MANUAL

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

7.0 **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.

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

EXHIBIT 8 MISCELLANEOUS INFORMATION

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

8.0 <u>Miscellaneous Information</u>

This miscellaneous information includes details of the measured bandedge, the test procedure and calculation of factor such as pulse desensitization.

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

8.1 20dB BW Plot

Pursuant to FCC part 15 Section 15.215(c), the 20dB bandwidth of the emission was contained within the frequency band designated (mentioned as above) which the EUT operated. The effects, if any, from frequency sweeping, frequency hopping, other modulation techniques and frequency stability over excepted variations in temperature and supply voltage were considered.

Figure 8.1 Bandwidth

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

8.2 Discussion of Pulse Desensitization

Pulse desensitivity is not applicable for this device.

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

8.3 Emissions Test Procedures

The following is a description of the test procedure used by Intertek Testing Services in the measurements of transmitters operating under Part 15, Subpart C rules.

The test set-up and procedures described below are designed to meet the requirements of ANSI C63.10 - 2013.

The transmitting equipment under test (EUT) is placed on a styrene turntable which is four feet in diameter, up to 1GHz 0.8m and above 1GHz 1.5m in height above the ground plane. During the radiated emissions test, the turntable is rotated and any cables leaving the EUT are manipulated to find the configuration resulting in maximum emissions. The EUT is adjust through all three orthogonal axes to obtain maximum emission levels. The antenna height and polarization are varied during the testing to search for maximum signal levels.

Detector function for radiated emissions is in peak mode. Average readings, when required, are taken by measuring the duty cycle of the equipment under test and subtracting the corresponding amount in dB from the measured peak readings.

The frequency range scanned is from 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 40 GHz, whichever is lower.

Detector function for conducted emissions is in QP & AV mode and IFBW setting is 9 kHz from the frequency band 150 kHz to 30MHz.

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

8.3 Emissions Test Procedures (cont'd)

The EUT is warmed up for 15 minutes prior to the test.

AC power to the unit is varied from 85% to 115% nominal and variation in the fundamental emission field strength is recorded. If battery powered, a new, fully charged battery is used.

Conducted measurements are made as described in ANSI C63.10 - 2013.

The IF bandwidth used for measurement of radiated signal strength was 10 kHz for emission below 30 MHz and 120 kHz for emission from 30 MHz to 1000 MHz. Where pulsed transmissions of short enough pulse duration warrant, a greater bandwidth is selected according to the recommendations of Hewlett Packard Application Note 150-2. Above 1000 MHz, a resolution bandwidth of 1 MHz is used, RBW 3MHz used for fundamental emission.

Transmitter measurements are normally conducted at a measurement distance of three meters. However, to assure low enough noise floor in the restricted bands and above 1 GHz, signals are acquired at a distance of one meter or less. All measurements are extrapolated to three meters using inverse scaling, but those measurements taken at a closer distance are so marked.

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

EXHIBIT 9 CONFIDENTIALITY REQUEST

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

9.0 **Confidentiality Request**

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

.

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

EXHIBIT 10 TEST EQUIPMENT LIST

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ

10.0 Test Equipment List

Equipment No.	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due Date
SZ061-03	BiConiLog Antenna	ETS	3142C	00066460	14-Jun-15	14-Jun-16
SZ061-07	Pyramidal Horn Antenna	ETS	3160-09	00083067	3-Sep-14	3-Sep-15
SZ061-08	Horn Antenna	ETS	3115	00092346	19-Oct-14	19-Oct-15
SZ061-06	Active Loop Antenna	Electro-Metrics	EM-6876	217	29-Apr-15	29-Apr-16
SZ056-03	Spectrum Analyzer	R&S	FSP30	101148	8-Jun-15	8-Jun-16
SZ181-04	Preamplifier	Agilent	8449B	3008A02474	7-Feb-15	7-Feb-16
SZ188-01	Anechoic Chamber	ETS	RFD-F/A- 100	4102	19-Apr-14	19-Apr-16
SZ062-02	RF Cable	RADIALL	RG 213U	1	30-Jun-15	30-Dec-15
SZ062-06	RF Cable	RADIALL	0.04- 26.5GHz		30-Jun-15	30-Dec-15
SZ062-12	RF Cable	RADIALL	0.04- 26.5GHz	1	7-Apr-15	7-Oct-15
SZ067-04	Notch Filter	Micro-Tronics	BRM5070 2-02	-	20-May-15	20-May-16
SZ185-02	EMI Test Receiver	R&S	ESCI	100692	1-Nov-14	1-Nov-15
SZ187-01	Two-Line V- Network	R&S	ENV216	100072	1-Nov-14	1-Nov-15
SZ187-02	Two-Line V- Network	R&S	ENV216	100073	1-Nov-14	1-Nov-15
SZ188-03	Shielding Room	ETS	RFD-100	4100	23-Aug-14	23-Aug-15

TRF No.: FCC 15C_TX_b FCC ID: RBD-M710GZ