

# DDM Brands LLC

## GSM Mobile Phone

**Main Model: RITMO2YZ420A**  
**Serial Model: RITMO2YZ420XX**

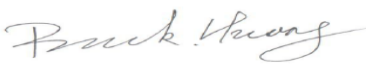


**15th May, 2012**

**Report No.: 12070085-A1-FCC-R1**  
(This report supersedes NONE)



Modifications made to the product : None

This Test Report is Issued Under the Authority of:

		
<b>Back Huang</b> Compliance Engineer	<b>Alex Liu</b> Technical Manager	

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Test result presented in this test report is applicable to the representative sample only.

# RF Test Report

To: FCC Part 22(H) & FCC Part 24(E): 2011

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## Laboratory Introduction

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Country/Region	Accreditation Body	Scope
USA	FCC, A2LA	EMC , RF/Wireless , Telecom
Canada	IC, A2LA, NIST	EMC, RF/Wireless , Telecom
Taiwan	BSMI , NCC , NIST	EMC, RF, Telecom , Safety
Hong Kong	OFTA , NIST	RF/Wireless ,Telecom
Australia	NATA, NIST	EMC, RF, Telecom , Safety
Korea	KCC/RRA, NIST	EMI, EMS, RF , Telecom, Safety
Japan	VCCI, JATE, TELEC, RFT	EMI, RF/Wireless, Telecom
Mexico	NOM, COFETEL, Caniety	Safety, EMC , RF/Wireless, Telecom
Europe	A2LA, NIST	EMC, RF, Telecom , Safety

### Accreditations for Product Certifications

Country/Region	Accreditation Body	Scope
USA	FCC TCB, NIST	EMC , RF , Telecom
Canada	IC FCB , NIST	EMC , RF , Telecom
Singapore	iDA, NIST	EMC , RF , Telecom
EU	NB	EMC & R&TTE Directive
Japan	MIC, (RCB 208)	RF , Telecom
Hong Kong	OFTA (US002)	RF , Telecom

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**CONTENTS**

**1. EXECUTIVE SUMMARY & EUT INFORMATION.....5**

**2. TECHNICAL DETAILS .....6**

**3. MODIFICATION .....7**

**4. TEST SUMMARY .....8**

**ANNEX A. TEST INSTRUMENT & METHOD .....9**

**ANNEX B. EUT AND TEST SETUP PHOTOGRAPHS .....12**

**ANNEX C. TEST SETUP AND SUPPORTING EQUIPMENT.....13**

**ANNEX D. USER MANUAL / BLOCK DIAGRAM / SCHEMATICS / PART LIST .....16**

**ANNEX E. DECLARATION OF SIMILARITY .....17**

## 1. EXECUTIVE SUMMARY & EUT INFORMATION

The purpose of this test programmed was to demonstrate compliance of the DDM Brands LLC GSM Mobile Phone and model: RITMO2YZ420A against the current Stipulated Standards. The GSM Mobile Phone has demonstrated compliance with the FCC Part 22(H) & FCC Part 24(E): 2011.

### EUT Information

#### EUT

**Description** : GSM Mobile Phone

**Main Model** : RITMO2YZ420A

**Serial Model** : RITMO2YZ420XX  
 : (The difference between Main model and Serial model please refer to the DECLARATION OF SIMILARITY provided by applicant.)

**Antenna Gain** : GSM850: 1 dBi  
 : PCS1900: 1 dBi  
 : Bluetooth: -2 dBi

**Input Power** : AC/DC ADAPTOR  
 : Model: ND-0500500U  
 : Input: AC 100-240 V 50/60 Hz 0.16 A MAX  
 : Output: DC 5.0 V 500 mA  
 : Li-ion Battery:  
 : Model: YB100  
 : Capacity: 700 mAh  
 : Nominal voltage: 3.7 V  
 : Charging voltage limit: 4.2V

**Maximum Conducted Peak Power to Antenna** : Please refer to report 12070085-FCC-R1 (FCC ID: A4JRITMO3TV)

**Maximum Radiated ERP/EIRP** : Please refer to report 12070085-FCC-R1 (FCC ID: A4JRITMO3TV)

**Classification Per Stipulated Test Standard** : FCC Part 22(H) & FCC Part 24(E): 2011

## 2. TECHNICAL DETAILS

<b>Purpose</b>	<b>Compliance testing of GSM Mobile Phone with stipulated standard</b>
<b>Applicant / Client</b>	<b>DDM Brands LLC 1612 NW, 84<sup>TH</sup> Ave. Miami, Florida, U.S.A 33126</b>
<b>Manufacturer</b>	<b>DDM Brands LLC B-602,HengYu Center, NanShan, ShenZhen, China518054</b>
<b>Laboratory performing the tests</b>	<b>SIEMIC Nanjing (China) Laboratories NO.2-1,Longcang Dadao, Yuhua Economic Development Zone, Nanjing, China Tel:+86(25)86730128/86730129 Fax:+86(25)86730127 Email:info@siemic.com</b>
<b>Test report reference number</b>	<b>12070085-A1-FCC-R1</b>
<b>Date EUT received</b>	<b>28th April, 2012</b>
<b>Standard applied</b>	<b>FCC Part 22(H) &amp; FCC Part 24(E): 2011</b>
<b>Dates of test</b>	<b>N/A</b>
<b>No of Units</b>	<b>#1</b>
<b>Equipment Category</b>	<b>PCE</b>
<b>Trade Name</b>	<b>YEZZ</b>
<b>RF Operating Frequency (ies)</b>	<b>GSM850 TX : 824.2 ~ 848.8 MHz; RX : 869.2 ~ 893.8 MHz PCS1900 TX : 1850.2 ~ 1909.8 MHz; RX : 1930.2 ~ 1989.8 MHz Bluetooth : 2402-2480 MHz</b>
<b>Number of Channels</b>	<b>300CH (PCS1900) and 125CH (GSM850) Bluetooth: 79CH</b>
<b>Modulation</b>	<b>GSM / GPRS: GMSK Bluetooth: GFSK</b>
<b>GPRS Multi-slot class</b>	<b>8/10/12</b>
<b>FCC ID</b>	<b>A4JRITMO2</b>

### 3. MODIFICATION

**NONE**

## 4. TEST SUMMARY

**The product was tested in accordance with the following specifications.  
All testing has been performed according to below product classification:**

### PCE

#### Test Results Summary

Test Standard	Description	Product Class	Pass / Fail
§ 1.1307, § 2.1093	RF Exposure (SAR)	See Above	Refer to report 12070085-FCC-R1 (FCC ID: A4JRITMO3TV)
§2.1046; § 22.913 (a); § 24.232 (c)	RF Output Power	See Above	
§ 2.1047	Modulation Characteristics	See Above	
§ 2.1049; § 22.905 § 22.917; § 24.238	99% & -26 dB Occupied Bandwidth	See Above	
§ 2.1051, § 22.917 (a); § 24.238 (a)	Spurious Emissions at Antenna Terminal	See Above	
§ 2.1053 § 22.917 (a); § 24.238 (a)	Field Strength of Spurious Radiation	See Above	
§ 22.917 (a); § 24.238 (a)	Out of band emission, Band Edge	See Above	
§ 2.1055 § 22.355; § 24.235	Frequency stability vs. temperature Frequency stability vs. voltage	See Above	

**Note 1:** Testing was performed by configuring EUT to maximum output power status, the declared output power class for different.

**Note 2:** The Serial Model Name RITMO2YZ420XX, XX represent different model for different Color. For example: RITMO2YZ420PU, RITMO2YZ420G, RITMO2YZ42 and so on. There is no electrical change has been made to the equipment that alters the compliance characteristics. The difference of these different models is for different color and surface of the printing.

**Note 3:** In this report, we used same test data with project 12070085 -FCC-R1(FCC ID: A4JRITMO3TV), because the two models have the same layout, the sample of this project is without TV function. The differences have no effect on GSM compliance characteristics.



## **Annex A. TEST INSTRUMENT & METHOD**

### **Annex A.i. TEST INSTRUMENTATION & GENERAL PROCEDURES**

Instrument	Model	Calibration Date	Calibration Due Date
<b>RF conducted test</b>			
Agilent ESA-E SERIES SPECTRUM ANALYZER	E4407B	10/25/2011	10/25/2012
Power Splitter	1#	02/02/2012	02/02/2013
Universal Radio Communication Tester	CMU200	02/22/2012	02/22/2013
Temperature/Humidity Chamber	1007H	01/08/2012	01/08/2013
DC Power Supply	PS-305D	02/22/2012	02/22/2013
<b>Radiated Emissions</b>			
Hp Spectrum Analyzer	8563E	01/10/2012	01/10/2013
Agilent ESA-E SERIES SPECTRUM ANALYZER	E4407B	10/25/2011	10/25/2012
R&S EMI Receiver	ESPI3	05/18/2011	05/18/2012
Antenna (30MHz~2GHz)	JB1	05/25/2011	05/25/2012
ETS-Lindgren Antenna(1 ~18GHz)	3115	06/02/2011	06/02/2012
A-INFOMW Antenna(1 ~18GHz)	JXTXLB-10180	06/02/2011	06/02/2012
Horn Antenna (18~40GHz)	AH-840	07/23/2011	07/23/2013
Microwave Pre-Amp (18~40GHz)	PA-840	Every 2000 Hours	
Hp Agilent Pre-Amplifier	8447F	05/25/2011	05/25/2012
MITEQ Pre-Amplifier(1 ~ 18GHz)	AMF-7D-00101800-30-10P	05/25/2011	05/25/2012
Universal Radio Communication Tester	CMU200	02/22/2012	02/22/2013
Chamber	3m	04/13/2012	04/13/2013

## **Annex A. ii. RADIATED EMISSIONS TEST DESCRIPTION**

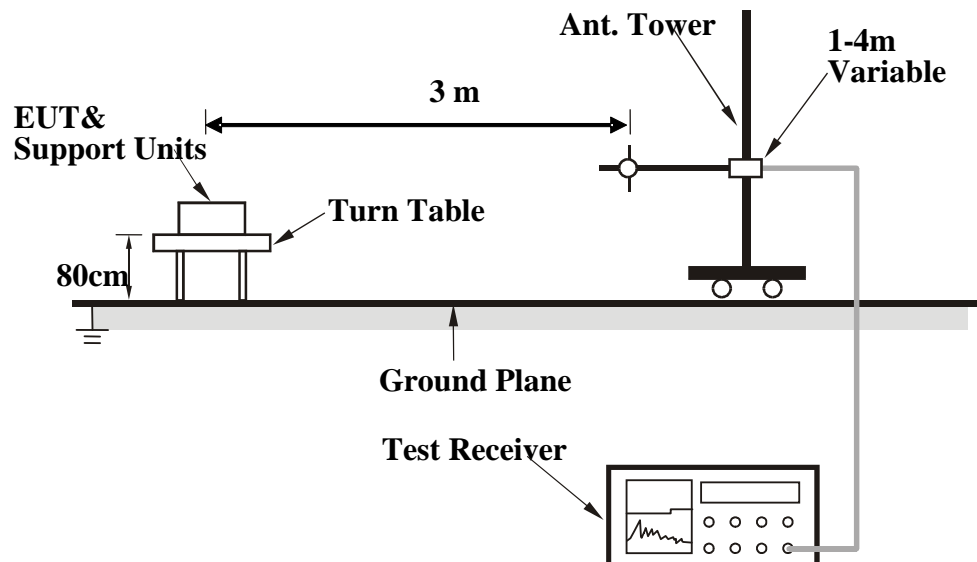
### **EUT Characterisation**

EUT characterisation, over the frequency range from 30MHz to 1GHz (for FCC tests, until the 10<sup>th</sup> harmonic for operating frequencies  $\geq 108\text{MHz}$ ), was done in order to minimise radiated emissions testing time while still maintaining high confidence in the test results.

The EUT was placed in the chamber, at a height of about 0.8m on a turntable. Its radiated emissions frequency profile was observed, using a spectrum analyzer /receiver with the appropriate broadband antenna placed 3m or 10m away from the EUT. Radiated emissions from the EUT were maximised by rotating the turntable manually, changing the antenna polarisation and manipulating the EUT cables while observing the frequency profile on the spectrum analyzer / receiver. Frequency points at which maximum emissions occurred, clock frequencies and operating frequencies were then noted for the formal radiated emissions test at the Open Area Test Site (OATS) or EMC 3m chamber.

### **Test Set-up**

1. The EUT and supporting equipment were set up in accordance with the requirements of the standard on top of a 1.5m X 1.0m X 0.8m high, non-metallic table.
2. The filtered power supply for the EUT and supporting equipment were tapped from the appropriate power sockets located on the turntable.
3. The relevant broadband antenna was set at the required test distance away from the EUT and supporting equipment boundary.



## **Test Method**

The following procedure was performed to determine the maximum emission axis of EUT:

1. With the receiving antenna is H polarization, rotate the EUT in turns with three orthogonal axes to determine the axis of maximum emission.
2. With the receiving antenna is V polarization, rotate the EUT in turns with three orthogonal axes to determine the axis of maximum emission.
3. Compare the results derived from above two steps. So, the axis of maximum emission from EUT was determined and the configuration was used to perform the final measurement.

### **Final Radiated Emission Measurement**

1. Setup the configuration according to figure 1. Turn on EUT and make sure that it is in normal function.
2. For emission frequencies measured below 1 GHz, a pre-scan is performed in a shielded chamber to determine the accurate frequencies of higher emissions will be checked on a open test site or EMC 10m chamber. As the same purpose, for emission frequencies measured above 1 GHz, a pre-scan also be performed with a 1 meter measuring distance before final test.
3. For emission frequencies measured below and above 1 GHz, set the spectrum analyzer on a 100 kHz and 1 MHz resolution bandwidth respectively for each frequency measured in step 2.
4. The search antenna is to be raised and lowered over a range from 1 to 4 meters in horizontally polarized orientation. Position the highness when the highest value is indicated on spectrum analyzer, then change the orientation of EUT on test table over a range from 0 ° to 360 ° with a speed as slow as possible, and keep the azimuth that highest emission is indicated on the spectrum analyzer. Vary the antenna position again and record the highest value as a final reading.
5. Repeat step 4 until all frequencies need to be measured were complete.
6. Repeat step 5 with search antenna in vertical polarized orientations.

During the radiated emission test, the Spectrum Analyzer was set with the following configurations:

Frequency Band (MHz)	Function	Resolution bandwidth	Video Bandwidth
30 to 1000	Peak	100 kHz	100 kHz
Above 1000	Peak	1 MHz	1 MHz
	Average	1 MHz	10 Hz

## **Description of Radiated Emission Program**

This EMC Measurement software run LabView automation software and offers a common user interface for electromagnetic interference (EMI) measurements. This software is a modern and powerful tool for controlling and monitoring EMI test receivers and EMC test systems. It guarantees reliable collection, evaluation, and documentation of measurement results. Basically, this program will run a pre-scan measurement before it proceeds with the final measurement. The pre-scan routine will run the scan on four different antenna heights, 2 antenna polarity, and 360 degrees table rotation. For example, the program was set to run 30 MHz to 1 GHz scan; the program will first start from a meter antenna height and divide the 30 MHz to 1 GHz into 10 separate parts of maximum hold sweeps. Each parts of maximum hold sweep, the program will collect the data from 0 degree to 360 degrees table rotation. After the program complete the 1m scan, the antenna continues to rise to 2m and continue the scan. The step will repeated for all specified antenna height and polarity. This program will perform the Quasi Peak measurement after the signal maximization process and pre-scan routine. The final measurement will be base on the pre-scan data reduction result.

## **Sample Calculation Example**

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. For the limit is employed average value, therefore the peak value can be transferred to average value by subtracting the duty factor. The basic equation with a sample calculation is as follows:

$$\text{Peak} = \text{Reading} + \text{Corrected Factor}$$

where

Corr. Factor = Antenna Factor + Cable Factor - Amplifier Gain (if any)

And the average value is

$$\begin{aligned} \text{Average} &= \text{Peak Value} + \text{Duty Factor or} \\ \text{Set RBW} &= 1\text{MHz, VBW} = 10\text{Hz.} \end{aligned}$$

Note:

If the measured frequencies are fall in the restricted frequency band, the limit employed must be quasi peak value when frequencies are below or equal to 1 GHz. And the measuring instrument is set to quasi peak detector function.

## **Annex B. EUT AND TEST SETUP PHOTOGRAPHS**

**Please see the attachment**

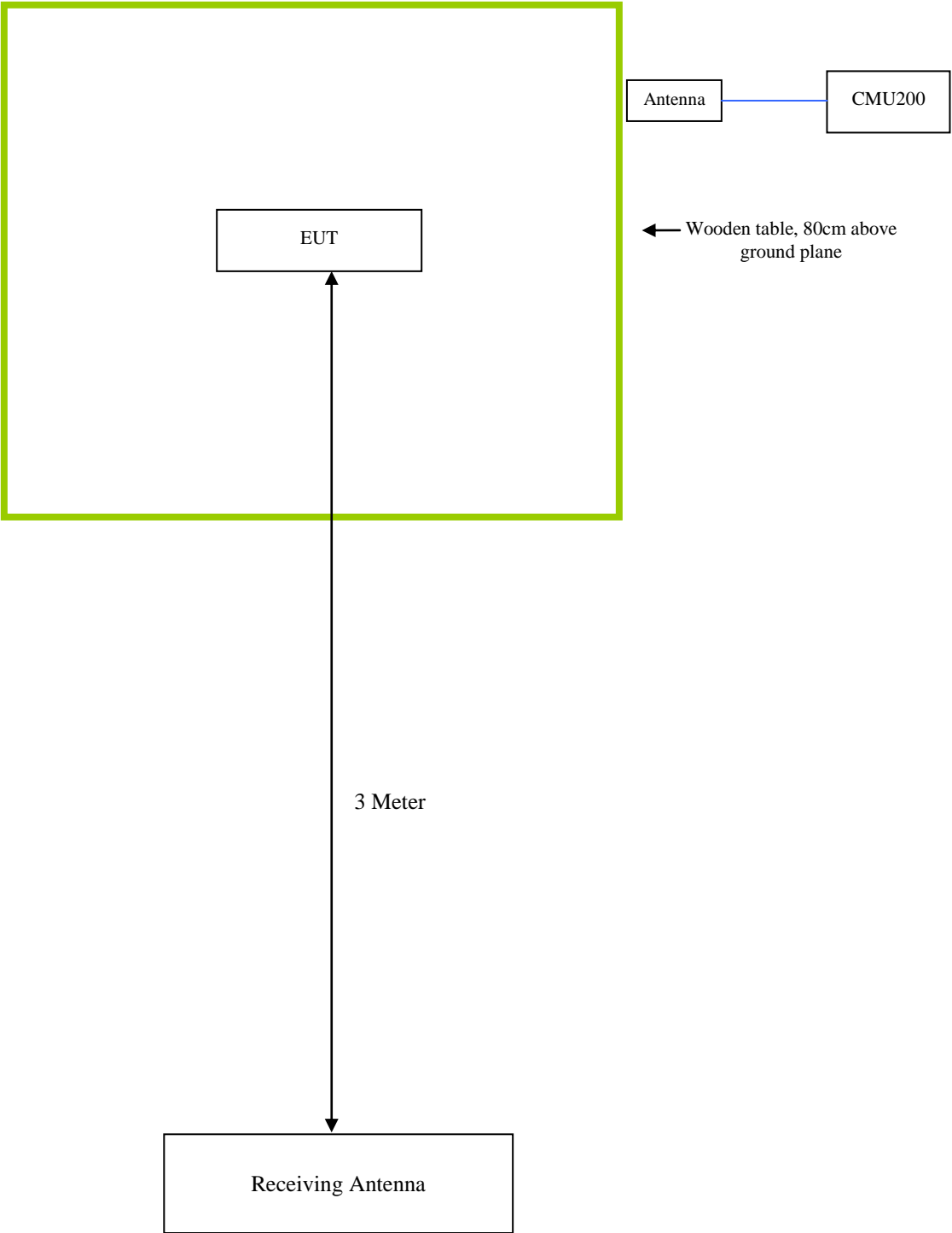
## **Annex C. TEST SETUP AND SUPPORTING EQUIPMENT**

### **EUT TEST CONDITIONS**

#### **Annex C. i. SUPPORTING EQUIPMENT DESCRIPTION**

The following is a description of supporting equipment and details of cables used with the EUT.

Block Configuration Diagram for Radiated Emissions



## **Annex C.ii. EUT OPERATING CONDITIONS**

The following is the description of how the EUT is exercised during testing.

Test	Description Of Operation
<b>Emissions Testing</b>	The EUT was communicating with base station and set to work at maximum output power.
<b>Others Testing</b>	The EUT was communicating with base station and set to work at maximum output power.

## **Annex D. USER MANUAL / BLOCK DIAGRAM / SCHEMATICS / PART LIST**

**Please see attachment**



## **Annex E. DECLARATION OF SIMILARITY**



[ Design **Development** **Manufacturing** ]

To: SIEMIC ,2206 Ringwood Avenue, San Jose, C, USA

### **Declaration letter**

We DDM Brands LLC. here by declare that: The difference between RITMO2YZ420A and RITMO3TVYZ433A is below: delete TV function. No other differences.

For our business issue and marketing requirement, we would like to list different models numbers on the FCC certificates and reports, as following:

Model No.: RITMO2YZ420A, RITMO2YZ420XX (XX:COLOR MARKER).

The Serial Model Name RITMO2YZ420XX. XX represent different model for different Color. For example: RITMO2YZ420PU, RITMO2YZ420G, RITMO2YZ420B and so on.

We declare that there is no electrical change has been made to the equipment that alters the

compliance characteristics. The difference of these different models is for different Color and **Surface of the printing**. Please kindly handle on the project.

The model RITMO2YZ420A mobile phone is different RITMO3TVYZ433A from

Thank you!



Printed name/Title: Luis Sosa /CEO

Address: 1612 NW, 84<sup>TH</sup> Ave. Miami, Florida, U.S.A 33126