

DUETECH

# ELECTROMAGNETIC EMISSION COMPLIANCE REPORT FOR LOW-POWER, NON-LICENSED TRANSMITTER

Test Report No. : W162R-D010

AGR No. : A162A-071

Applicant : LG Innotek Co., Ltd.

Address : 978-1, Jangduk-dong, Gwangsan-gu, Gwangju, 506-731, Korea

Manufacturer : SUZHOU NIHONE Electronics Technology Co., LTD.

Address : No.185 XiaoXiang Road Suzhou High tech Zone

Type of Equipment : Electric Shelf Label

FCC ID. : YZP-REBETZ27A

Model Name : REBE-TZ27A

Multiple Model Name : REBE-MZ27A

Serial number : N/A

Total page of Report : 6 pages (including this page)

Date of Incoming : January 29, 2016

Date of issue : February 15, 2016

# **SUMMARY**

The equipment complies with the regulation; FCC PART 15 SUBPART C Section 15.247

This test report only contains the result of a single test of the sample supplied for the examination.

It is not a generally valid assessment of the features of the respective products of the mass-production.

Reviewed by:

Ki-Hong, Nam / Asst, Chief Engineer ONETECH Corp.

Approved by:

Sung-Ik, Han/ Managing Director ONETECH Corp.

Report No.: W162R-D010

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EMC-003 (Rev.2)

HEAD OFFICE: 301-14 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-799-9500, FAX: 82-31-799-9599) EMC Testing Div.: 307-51 Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do 464-862 Korea (TEL: 82-31-765-8289, FAX: 82-31-766-2904)





# **CONTENTS**

	PAGE
1. VERIFICATION OF COMPLIANCE	4
2. GENERAL INFORMATION	5
2.1 PRODUCT DESCRIPTION	5
2.2 ALTERNATIVE TYPE(S)/MODEL(S); ALSO COVERED BY THIS TEST REPORT	5
3. EUT MODIFICATIONS	5
4.1 RF Exposure Limit	6
4.2 EUT DESCRIPTION	6
4.3 TEST RESULT	6

Report No.: W162R-D010



Page 3 of 6 Report No.: W162R-D010

# **Revision History**

Issued Report No.	Issued Date	Revisions	Effect Section
W162R-D010	February 15, 2016	Initial Issue	All

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# 1. VERIFICATION OF COMPLIANCE

Applicant : LG Innotek Co., Ltd.

Address : 978-1, Jangduk-dong, Gwangsan-gu, Gwangju, 506-731, Korea

Contact Person : Jeong, Inchang / Director

Telephone No. : +86-62-950-0332 FCC ID : YZP-REBETZ27A

Model Name : REBE-TZ27A

Serial Number : N/A

Date : February 15, 2016

EQUIPMENT CLASS	DTS – DIGITAL TRNSMISSION SYSTEM		
E.U.T. DESCRIPTION	Electric Shelf Label		
THIS REPORT CONCERNS	Original Grant		
MEASUREMENT PROCEDURES	ANSI C63.10: 2013		
TYPE OF EQUIPMENT TESTED	Pre-Production		
KIND OF EQUIPMENT			
AUTHORIZATION REQUESTED	Certification		
EQUIPMENT WILL BE OPERATED	FOG DADE 15 GARDADE G. C. A.		
UNDER FCC RULES PART(S)	FCC PART 15 SUBPART C Section 15.247		
Modifications on the Equipment to Achieve	N		
Compliance	None		
Final Test was Conducted On	3 m, Semi Anechoic Chamber		

<sup>-.</sup> The above equipment was tested by ONETECH Corp. for compliance with the requirement set forth in the FCC Rules and Regulations. This said equipment in the configuration described in this report, shows the maximum emission levels emanating from equipment are within the compliance requirements.

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# 2. GENERAL INFORMATION

# 2.1 Product Description

The LG Innotek Co., Ltd., Model REBE-TZ27A (referred to as the EUT in this report) is a Electric Shelf Label. The product specification described herein was obtained from product data sheet or user's manual.

Device Type	Electric Shelf Label			
Temperature Range	0 °C ~ +40 °C			
Operating Frequency	2 405 MHz ~ 2 480 MHz			
RF Output Power	4.38 dBm			
Number of Channel	16 Channel			
Modulation Type	O-QPSK			
Antenna Type	PCB Pattern Antenna			
USED RF CHIP	Marker: TEXAS INSRUMENTS  Model Name: CC2530			
Antenna Gain	1.32 dBi			
List of each Osc. or crystal  Freq.(Freq. >= 1 MHz)	16 MHz			
RATED SUPPLY VOLTAGE	3.0 V Battery(CR2450)			

# 2.2 Alternative type(s)/model(s); also covered by this test report.

-. The following lists consist of the added model and their differences.

Model Name	Differences			
DEDE TZOZA	Basic Model.			
REBE-TZ27A	(DISPLAY: COLOR)	Ø		
DEDE MZOZA	These models are identical to basic model except for the DISPLAY.			
REBE-MZ27A	(DISPLAY: MONO)			

Note: 1. Applicant consigns only basic model to test. Therefore this test report just guarantees the units, which have been tested.

2. The Applicant/manufacturer is responsible for the compliance of all variants.

# 3. EUT MODIFICATIONS

-. None

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EMC-003 (Rev.2)



Report No.: W162R-D010

# **4.1 RF Exposure Limit**

According to the FCC rule 1.1310, the limit for General Population/Uncontrolled exposure is  $1 \text{ mW/cm}^2$  for the device operating  $1500 \sim 100000 \text{ MHz}$ .

**4.2 EUT Description** 

Kind of EUT	Electric Shelf Label				
	☐ Wireless Microphone: 494.000 MHz ~ 501.000 MHz				
	and 498.200 MHz ~ 505.200 MHz				
	□ WLAN: 2 412 MHz ~ 2 462 MHz				
Operating Frequency Band	□ WLAN: 5 180 MHz ~ 5 320 MHz / 5 500 MHz ~ 5 700 MHz				
	□ WLAN: 5 745 MHz ~ 5 825 MHz				
	☐ Bluetooth: 2 402 MHz ~ 2 480 MHz				
	■ Zigbee: 2 405 MHz ~ 2 480 MHz				
	☐ Portable (< 20 cm separation)				
Device Category	☐ Mobile (> 20 cm separation)				
	■ Others				
Max. Output Power	4.38 dBm				
Used Antenna	PCB Pattern Antenna				
Used Antenna Gain	1.32 dBi				
	■ MPE				
Exposure Evaluation Applied	□ SAR				
	□ N/A				

# 4.3 Test Result

According to above equation, the following result was obtained.

Operating Mode	Target Power W/tolerance	Max tune up		Antenna Gain		Safe Distance	Power Density (mW/cm²)	Limit
	(dBm)	(dBm)	(mW)	Log	Linear	(cm)	@ 20 cm Separation	(mW/cm²)
Zigbee	$4.0 \pm 0.5$	4.5	2.82	1.32	1.36	0.55	0.000 8	1.00

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