

# **RF Exposure Report**

Report No.: FCC RF SL19081501-DGC-003 BLE MPE

FCC ID: UJV-DIGBT

Test Model: 410BT

Series Model: BOHE-BT, BOHE-BTI, 410BT-000, 410BT-MVA, 410BT-ASV, 410BT-000,

410BT-075, 410BT-075BSP, 410BT-100, 410BT-100BSP, 410BT-150,

410BT-150BSP, 410BT-200, 410BT-200BSP

**Received Date:** 08/15/2019

**Test Date:** 10/30/2019 – 11/6/2019

**Issued Date:** 11/27/2019

**Applicant:** DIG Corporation

Address: 1210 Activity Drive, Vista, CA 92081 USA

Manufacturer: DIG Corporation

Address: 1210 Activity Drive, Vista, CA 92081 USA

**Issued By:** Bureau Veritas Consumer Products Services, Inc.

Lab Address: 775 Montague Expressway, Milpitas, CA 95035

**Test Location (1):** 775 Montague Expressway, Milpitas, CA 95035

FCC Registration / 540430 Designation Number:





This report is for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents. Unless specific mention, the uncertainty of measurement has been explicitly taken into account to declare the compliance or non-compliance to the specification. The report must not be used by the client to claim product certification, approval, or endorsement by A2LA or any government agencies.

Report No.: FCC\_RF\_SL19081501-DGC-003\_BLE\_MPE Page No. 1 / 6 Report Format Version: 6.1.1



# **Table of Contents**

ase Control Record	3
Certificate of Conformity	4
·	
MPE Calculation Formula	
Classification	
Calculation Result of Maximum Conducted Power	6
Conclusion	6
	Certificate of Conformity



## **Release Control Record**

Issue No.	Description	Date Issued	
FCC_RF _SL19081501-DGC-003_BLE_MPE	Orignal Release	11/27/2019	

Report No.: FCC\_RF\_SL19081501-DGC-003\_BLE\_MPE Page No. 3 / 6 Report Format Version: 6.1.1



### 1 Certificate of Conformity

**Product:** DIG Irrigation Timer w/ BT

Brand: DIG BT

Test Model: 410BT

Series Model: BOHE-BT, BOHE-BTI, 410BT-000, 410BT-MVA, 410BT-ASV, 410BT-000, 410BT-

075, 410BT-075BSP, 410BT-100, 410BT-100BSP, 410BT-150, 410BT-150BSP,

410BT-200. 410BT-200BSP

Identification 3518, 4318

Number of EUT:

Sample Status: Engineering sample

**Applicant: DIG CORPORATION** 

Standards: FCC Part 2 (Section 2.1093)

KDB 447498 D01 General RF Exposure Guidance v06

IEEE C95.1-1992

The above equipment has been tested by **Bureau Veritas Consumer Products Services**, **Inc.**, **Milpitas Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

Prepared by :	JUN 3	,	Date:	11/27/2019	
	Vao-Wei Lee / Test Engineer		_		

Approved by : \_\_\_\_\_\_\_, Date: \_\_\_\_\_\_\_, 11/27/2019

Chen Ge / Engineer Reviewer

المعوال تردورا



### 2 RF Exposure

# 2.1 Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )	Average Time (minutes)			
	Limits For General Population / Uncontrolled Exposure						
0.3-1.34	614	1.63	(100)*	30			
1.34-30	824/f	2.19/f	(180/f <sup>2</sup> )*	30			
30-300	27.5	0.073	0.2	30			
300-1500			f/1500	30			
1500-100,000			1.0	30			

f = Frequency in MHz; \*Plane-wave equivalent power density

### 2.2 MPE Calculation Formula

 $Pd = (Pout*G) / (4*pi*r^2)$ 

Where

Pd = power density in mW/cm<sup>2</sup>

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

## 2.3 Classification

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as Mobile Device.

#### 2.4 Antenna Gain

The antenna type is an integrated antenna with 1.5 dBi gain.



### 2.5 Calculation Result of Maximum Conducted Power

Frequency Band (MHz)	Max Power (dBm)	Max Power (mW)	Tune-Up Tolerance	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm²)	Limit (mW/cm²)
2402-2480	2.54	1.795	±1dB	1.6	20	0.000650	1

#### Note:

- 1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
- 2. Calculate the Power Density thresholds from condition "1" formulas.

### 3 Conclusion

### **Conclusion:**

The formula of calculated the MPE is:

CPD1 / LPD1 + CPD2 / LPD2 + .....etc. < 1

CPD = Calculation power density

LPD = Limit of power density

BT\_LE = 0.000650 < 1

Therefore the maximum calculations of above situations are less than the "1" limit.

--- END ---