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 / Designation Number:	540430

TESTING CERT # 2742-01

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.

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Release Control Record

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

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 Number of EUT :	3518, 4318
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 : _____ , **Date:** 11/27/2019

Yao-Wei Lee / Test Engineer

Approved by : _____ , **Date:** 11/27/2019

Chen Ge / Engineer Reviewer

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^2)	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	($180/f^2$)*	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^2

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/cm^2)	Limit (mW/cm^2)
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.

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