

## RF Exposure Report

**Report No.:** SA171003C10C

**FCC ID:** S4L4FIC00

**Test Model:** 4FIC00

**Received Date:** Oct. 03, 2017

**Test Date:** Oct. 25 ~ Nov. 07, 2017

**Issued Date:** Nov. 09, 2017

**Applicant:** TomTom International B.V.

**Address:** De Ruijterkade 154, 1011 AC Amsterdam The Netherlands

**Issued By:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

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**Test Location (1):** No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)

**Test Location (2):** No.215, Sec. 3, Beixin Rd., Xindian Dist., New Taipei City 231, Taiwan, R.O.C

**FCC Registration /** 427177 / TW0011  
**Designation Number:**



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### Release Control Record

Issue No.	Description	Date Issued
SA171003C10C	Original release	Nov. 09, 2017

## 1 Certificate of Conformity

**Product:** TomTom BRIDGE Hub

**Brand:** TOMTOM

**Test Model:** 4FIC00

**Sample Status:** Pre-MFB build sample

**Applicant:** TomTom International B.V.

**Test Date:** Oct. 25 ~ Nov. 07, 2017

**Standards:** FCC Part 2 (Section 2.1091)

KDB 447498 D01 General RF Exposure Guidance v06

IEEE C95.1

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan 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 :** Celine Chou , **Date:** Nov. 09, 2017  
Celine Chou / Specialist

**Approved by :** Ken Liu , **Date:** Nov. 09, 2017  
Ken Liu / Senior Manager

## 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				
300-1500	...	...	F/1500	30
1500-100,000	...	...	1.0	30

F = Frequency in MHz

### 2.2 MPE Calculation Formula

$$P_d = (P_{out} * G) / (4 * \pi * r^2)$$

where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = 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.

### 3 Calculation Result of Maximum Conducted Power

Function	Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
WLAN	2412-2462	19.23	1.69	20	0.025	1
	5180-5240	12.98	3.11	20	0.008	1
	5260-5320	12.97	3.11	20	0.008	1
	5500-5700	12.95	3.11	20	0.008	1
	5745-5825	12.95	3.11	20	0.008	1
BT	2402-2480	2.62	1.69	20	0.001	1
BT LE	2402-2480	2.58	1.69	20	0.001	1

#### Conclusion:

WLAN (2.4GHz or 5GHz) and BT (BT EDR or BT LE) technology can transmit simultaneously.

The formula of calculated the MPE is:

$CPD1 / LPD1 + CPD2 / LPD2 + \dots \text{etc.} < 1$

CPD = Calculation power density

LPD = Limit of power density

WALN 2.4GHz + BT =  $0.025 / 1 + 0.001 / 1 = 0.026$

---END---