# **RF Exposure Evaluation Report**

APPLICANT : TomTom International BV

**EQUIPMENT**: GPS Navigation System

**BRAND NAME**: TomTom

MODEL NAME : 4FC54A

FCC ID : S4L4FC54A

STANDARD : 47 CFR Part 2.1093

FCC KDB 447498 D01 v05r02

We, SPORTON INTERNATIONAL INC., would like to declare that the device has been evaluated in accordance with 47 CFR Part 2.1093, and pass the limit. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Reviewed by: Eric Huang / Deputy Manager

Este mans

Jones/sai

Approved by: Jones Tsai / Manager





**Report No. : FA451294** 

#### SPORTON INTERNATIONAL INC.

No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: S4L4FC54A Page Number : 1 of 5
Report Issued Date : Jun. 17, 2014

Report Version : Rev. 01

### **Table of Contents**

1.	Administration Data	3
2.	General Information	4
2.1	Description of Device Under Test (DUT)	4
3.	Maximum RF output power among production units	4
3.1	Applied Standard	4
4	RF Exposure Evaluation	5

## **Revision History**

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA451294	Rev. 01	Initial issue of report	Jun. 17, 2014

TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: S4L4FC54A Page Number : 2 of 5 Report Issued Date : Jun. 17, 2014

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## 1. Administration Data

Testing Laboratory		
Test Site	SPORTON INTERNATIONAL INC.	
Test Site Location	No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-327-3456 FAX: +886-3-328-4978	

Applicant			
Company Name	TomTom International BV		
Address	De Ruijterkade 154, 1011 AC Amsterdam The Netherlands		

Manufacturer				
Company Name	1. Tech-Giant (Shanghai) Computer Co., Ltd			
Company Name	2. Inventec Appliances (Pudong) Corporation			
	1. C#,No.1, South Rongteng Road , Songjiang Export Processing Zone,			
Address	Shanghai, China			
	2. No. 789 Puxing Road, Shanghai, PRC			

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TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: S4L4FC54A Page Number : 3 of 5
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### 2. General Information

#### 2.1 <u>Description of Device Under Test (DUT)</u>

Product Feature & Specification			
DUT Type	GPS Navigation System		
Brand Name	TomTom		
Model Name	4FC54A		
FCC ID	S4L4FC54A		
Wireless Technology and Frequency Range	Bluetooth: 2402 MHz ~ 2480 MHz		
Mode	Bluetooth v2.1+EDR		
Antenna Type	wire Antenna		
HW Version	1.3		
SW Version	13		
DUT Stage	Production Unit		

**Remark:** The above DUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

### 3. Maximum RF output power among production units

Band / Mode	Average Power (dBm)	
	v2.1+EDR	
Bluetooth	1.0	

#### 3.1 Applied Standard

FCC KDB 447498 D01 v05r02

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TEL: 886-3-327-3456 FAX: 886-3-328-4978 FCC ID: S4L4FC54A Page Number : 4 of 5
Report Issued Date : Jun. 17, 2014
Report Version : Rev. 01

**Report No. : FA451294** 

#### 4. RF Exposure Evaluation

Bluetooth	mW	Separation	Frequency	Exclusion
Max Power (dBm)		Distance (mm)	(GHz)	Thresholds
1	1.00	0	2.48	0.31

#### Note:

1. Per KDB 447498 D01v05r02, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)]  $\cdot [\sqrt{f(GHz)}] \le 3.0$  for 1-g SAR and ≤ 7.5 for 10-g extremity SAR

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison

Conclusion: Per KDB 447498 D01v05r02, when the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion. The test exclusion threshold is 0.31 which is <= 3, SAR testing is not required.

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Page Number : 5 of 5 Report Issued Date: Jun. 17, 2014

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