

FCC SAR Test Report

APPLICANT : Dell Inc.
EQUIPMENT : Tablet PC
BRAND NAME : DELL
MODEL NAME : T02E; T02E001
FCC ID : E2K-T02E001
STANDARD : FCC 47 CFR Part 2 (2.1093)
ANSI/IEEE C95.1-1992
IEEE 1528-2003

We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures and had been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.



Reviewed by: Eric Huang / Deputy Manager



Approved by: Jones Tsai / Manager



SPORTON INTERNATIONAL INC.

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



Table of Contents

1. Administration Data	3
2. Guidance Standard	3
3. Equipment Under Test (EUT)	4
3.1 General Information	4
3.2 Maximum Tune-up Limit.....	5
4. Conducted RF Output Power (Unit: dBm).....	5
5. References.....	6
Appendix A. Original Report	

Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA481209-04	Rev. 01	Reduced Bluetooth power all the test case was follow original report, FCC ID: E2K-T02E001, Report No: FA481209-06, Rev.01 or appendix A.	Nov. 21, 2014

1. Administration Data

Testing Laboratory	
Test Site	SPORTON INTERNATIONAL INC.
Test Site Location	No. 52, Hwa Ya 1 st 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	Dell Inc.
Address	One Dell Way, Round Rock, Texas 78682, USA

Manufacturer	
Company Name	Dell Inc.
Address	One Dell Way, Round Rock, Texas 78682, USA

2. Guidance Standard

The Specific Absorption Rate (SAR) testing specification, method, and procedure for this device is in accordance with the following standards:

- FCC 47 CFR Part 2 (2.1093)
- ANSI/IEEE C95.1-1992
- IEEE 1528-2003
- FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r03
- FCC KDB 865664 D02 SAR Reporting v01r01
- FCC KDB 447498 D01 General RF Exposure Guidance v05r02

3. Equipment Under Test (EUT)

3.1 General Information

Product Feature & Specification	
Equipment Name	Tablet PC
Brand Name	DELL
Model Name	T02E; T02E001
FCC ID	E2K-T02E001
S/N	140813-0271
Wireless Technology and Frequency Range	WLAN 2.4GHz Band: 2412 MHz ~ 2462 MHz WLAN 5.2GHz Band: 5180 MHz ~ 5240 MHz WLAN 5.3GHz Band: 5260 MHz ~ 5320 MHz WLAN 5.5GHz Band: 5500 MHz ~ 5700 MHz WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz
Mode	• 802.11a/b/g/n/ac HT20/HT40/VHT20/VHT40/VHT80 • Bluetooth v3.0+HS , Bluetooth v4.0-LE
FW Version	BCM4335C0_003.001.009.0083.0376.hcd same as BCM4335C0_003.001.009.0083.0377.hcd
EUT Stage	Identical Prototype

Accessories Information				
AC Adapter	Brand Name	DELL	Model Name	HA10USNM130
	Vendor	Chicony		
	Power Rating	I/P: 100-240V~50/60Hz 0.3A ; O/P: 5V 2A		
Li-ion Battery	Brand Name	DELL	Model Name	K81RP
	Vendor	SIMPLO	Power Rating	21Wh, 3.7V
WLAN/ BT	Brand Name	Broadcom	Model Name	BCM4339
GPS	Brand Name	Broadcom	Model Name	BCM47521

3.2 Maximum Tune-up Limit

Mode	Average Power (dBm)	
	BT v3.0 with HS	BT v4.0 with LE
Low	3.5	2.0
Middle	6.5	4.5
High	4.5	3.0

4. Conducted RF Output Power (Unit: dBm)

<2.4GHz Bluetooth>

Mode	Average Power (dBm)	
	BT v3.0 with HS	BT v4.0 with LE
Low	3.36	1.59
Middle	6.04	4.41
High	4.11	2.53

Note:

- 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:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$$
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
 - The maximum power is 6.5dBm, therefore, the test exclusion threshold is 1.26 which is ≤ 3 , SAR testing is not required.



5. References

- [1] FCC 47 CFR Part 2 "Frequency Allocations and Radio Treaty Matters; General Rules and Regulations"
- [2] ANSI/IEEE Std. C95.1-1992, "IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz", September 1992
- [3] IEEE Std. 1528-2003, "Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
- [4] SPEAG DASY System Handbook
- [5] FCC KDB 447498 D01 v05r02, "Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies", Feb 2014
- [6] FCC KDB 865664 D01 v01r03, "SAR Measurement Requirements for 100 MHz to 6 GHz", Feb 2014.
- [7] FCC KDB 865664 D02 v01r01, "RF Exposure Compliance Reporting and Documentation Considerations" May 2013.