

FCC RF Test Report

APPLICANT : DELL
EQUIPMENT : Tablet PC
BRAND NAME : Dell
MODEL NAME : J42A
FCC ID : E2KJ42AW
STANDARD : FCC 47 CFR Part 2, 22(H), 24(E), 27
CLASSIFICATION : PCS Licensed Transmitter (PCB)

We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI / TIA / EIA-603-C-2004 and shown 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:



Jones Tsai / Manager



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FCC ID : E2KJ42AW

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Report Issued Date : Jan. 25, 2013

Report Version : Rev. 01



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG311130	Rev. 01	Initial issue of report	Jan. 25, 2013

SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	§22.913(a)(2)	RSS-132(4.4) SRSP-503(5.1.3)	Effective Radiated Power	< 7 Watts	PASS	-
3.1	§24.232(c)	RSS-133 (6.4) SRSP-510(5.1.2)	Equivalent Isotropic Radiated Power	< 2 Watts	PASS	-
3.1	§27.50(c)(10) §27.50(d)(4)	RSS-139 (6.4) SRSP-513(5.1.2)	Effective Radiated Power and Equivalent Isotropic Radiated Power	ERP < 3 Watts (LTE Band 17) EIRP < 1 Watt (LTE Band 4)	PASS	-

1 Administration Data

1.1 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

1.2 Applicant

Company Name	DELL
Address	One Dell Way, Round Rock, TX 78682 U.S.A

1.3 Manufacturer

Company Name	Dell
Address	One Dell Way, Round Rock, TX 78682 U.S.A.

2 General Information

2.1 Description of Equipment Under Test (EUT)

Product Feature & Specification	
EUT	Tablet PC
Brand Name	Dell
Model Name	J42A
FCC ID	E2KJ42AW
TX Frequency	WCDMA Band V: 826.4 MHz ~ 846.6 MHz WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz LTE Band 17: 706.5 MHz ~ 713.5 MHz LTE Band 4: 1710.7 MHz ~ 1754.3 MHz 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
Antenna Type	WWAN: Fixed Internal Antenna WLAN: PIFA Antenna Bluetooth: PIFA Antenna
HW Version	LA8763P
SW Version	1146.23
Uplink Modulations	WCDMA (Rel 99): QPSK HSDPA (Rel 6): QPSK HSUPA (Rel 6): QPSK LTE: QPSK, 16QAM 802.11b: DSSS (DBPSK / DQPSK / CCK) 802.11a/g/n: OFDM (BPSK / QPSK / 16QAM / 64QAM) Bluetooth : GFSK Bluetooth EDR : $\pi/4$ -DQPSK, 8-DPSK
Remark: 1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description. 2. 5600 MHz ~ 5650 MHz is notched.	

2.2 Emission Designator

FCC Rule	System	Type of Modulation	Frequency Range (MHz)	Maximum ERP/EIRP (W)	Frequency Tolerance (% , Hz, ppm)	Emission Designator
Part 22	WCDMA Band V	QPSK	824.0 – 849.0	0.1396	0.0038 ppm	4M16F9W
Part 24	WCDMA Band II	QPSK	1850.0 - 1910.0	0.2897	0.0019 ppm	4M17F9W
Part 27	LTE Band 4 Bandwidth 5 MHz	QPSK	1710.0 – 1755.0	0.1991	0.0019 ppm	4M52G7D
		16QAM	1710.0 – 1755.0	0.1726	0.0023 ppm	4M52D7W
Part 27	LTE Band 4 Bandwidth 10 MHz	QPSK	1710.0 – 1755.0	0.2009	0.0019 ppm	9M04G7D
		16QAM	1710.0 – 1755.0	0.1750	0.0023 ppm	9M04D7W
Part 27	LTE Band 17 Bandwidth 5 MHz	QPSK	704.0 – 716.0	0.1189	0.0012 ppm	4M52G7D
		16QAM	704.0 – 716.0	0.1014	0.0016 ppm	4M52D7W
Part 27	LTE Band 17 Bandwidth 10 MHz	QPSK	704.0 – 716.0	0.1208	0.0012 ppm	9M12G7D
		16QAM	704.0 – 716.0	0.0991	0.0016 ppm	9M16D7W

3 Test Result

3.1 Effective Radiated Power and Equivalent Isotropic Radiated Power Determination

3.1.1 Description of the ERP/EIRP

Effective radiated power output of mobile transmitters must not exceed 7 Watts for 824 MHz ~ 849 MHz, and the EIRP of mobile transmitters are limited to 2 Watts for 1850 MHz ~ 1910 MHz. Mobile and portable (hand-held) stations operating in the 698 MHz ~746 MHz band are limited to a peak ERP of 3 watts, and 1710 MHz ~ 1755 MHz band are limited to EIRP of 1 watt.

3.1.2 Procedures

According to section 2) of KDB 412172 D01v01, Guidelines for Determining the Effective Radiated Power (ERP) and Equivalent Isotropically Radiated Power (EIRP) of a RF Transmitting System, ERP can be derived as below

- i) DUT power is measured using a direct connection between the transmitter antenna port and the measurement instrumentation via a coaxial cable (conducted test).
- ii) The transmit antenna gain is a known quantity
- iii) The ERP/EIRP can be calculated by direct application of equations below

$$EIRP(dBm) = \text{Conducted Power}(dBm) + \text{Antenna Gain}(dBi)$$

$$ERP(dBm) = EIRP(dBm) - 2.15$$

3.1.3 Derived ERP and EIRP value

Wireless Interface	Type of Modulation	Frequency Range (MHz)	Conducted Power (mW)	Conducted Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	ERP (dBm)	EIRP (W)	ERP (W)
WCDMA Band V	QPSK	824.0 – 849.0	198.6	22.98	0.62	-	21.45	-	0.1396
WCDMA Band II	QPSK	1850.0 - 1910.0	199.5	23.00	1.62	24.62	-	0.2897	-
LTE Band 4 Bandwidth 5 MHz	QPSK	1710.0 – 1755.0	191.9	22.83	0.16	22.99	-	0.1991	-
LTE Band 4 Bandwidth 5 MHz	16QAM	1710.0 – 1755.0	166.3	22.21	0.16	22.37	-	0.1726	-
LTE Band 4 Bandwidth 10 MHz	QPSK	1710.0 – 1755.0	193.6	22.87	0.16	23.03	-	0.2009	-
LTE Band 4 Bandwidth 10 MHz	16QAM	1710.0 – 1755.0	168.7	22.27	0.16	22.43	-	0.1750	-
LTE Band 17 Bandwidth 5 MHz	QPSK	704.0 – 716.0	189.7	22.78	0.12	-	20.75	-	0.1189
LTE Band 17 Bandwidth 5 MHz	16QAM	704.0 – 716.0	161.8	22.09	0.12	-	20.06	-	0.1014
LTE Band 17 Bandwidth 10 MHz	QPSK	704.0 – 716.0	192.8	22.85	0.12	-	20.82	-	0.1208
LTE Band 17 Bandwidth 10 MHz	16QAM	704.0 – 716.0	199.1	21.99	0.12	-	19.96	-	0.0991