

Report No. : FR021101

Partial FCC RF Test Report

APPLICANT : Quanta Computer Inc.

EQUIPMENT: 802.11 b/g/n RTL8191SE miniCard

BRAND NAME : Realtek

MODEL NAME : RTL8191SE

FCC ID : TX2-RTL8191SE

STANDARD : FCC Part 15 Subpart C §15.247

CLASSIFICATION: Digital Transmission System (DTS)

This is a partial report which is only valid combined with the integrated WLAN module (Brand Name: Realtek / Model Name: RTL8191SE) report. The product was installed into Convertible Tablet Computer [Model Name: NL2** (The"*"can be 0-9, A-Z or blank for the marketing purpose)] during the test.

The product was received on Jan. 29, 2010 and completely tested on Feb. 26, 2010. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.4-2003 and shown the 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:

Roy Wu Manager

ilac-MRA



SPORTON INTERNATIONAL (KUNSHAN) INC. No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P.R.C.

TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958 FCC ID: TX2-RTL8191SE Page Number : 1 of 51
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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR021101	Rev. 01	Initial issue of report	Mar. 02, 2010

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SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	15.207	Gen 7.2.2	AC Conducted Emission	15.207(a)	Pass	Under limit 3.31 dB at 0.19 MHz
3.2	15.247(d)	A8.5	Transmitter Radiated Emission	15.209(a) & 15.247(d)	Pass	Under limit 1.45 dB at 147.45 MHz
3.3	15.203 & 15.247(b)	A8.4	Antenna Requirement	N/A	Pass	-

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1 General Description

1.1 Applicant

Quanta Computer Inc.

No. 188, Wen Hwa 2nd Rd., Kuei Shan Hsiang, Tao Yuan Shien, Taiwan

1.2 Manufacturer

Quanta Computer Inc.

No. 188, Wen Hwa 2nd Rd., Kuei Shan Hsiang, Tao Yuan Shien, Taiwan

1.3 Main Feature of Equipment Under Test

Product Feature & Specification					
Equipment	802.11 b/g/n RTL8191SE miniCard				
Brand Name	Realtek				
Model Name	RTL8191SE				
FCC ID	TX2-RTL8191SE				
Host Convertible Tablet Computer	Model Name: NL2** (The"*"can be 0-9, A-Z or blank for the marketing purpose) HW Version: Version B SW Version: Version 10				
Tx/Rx Frequency Range	2400 MHz ~ 2483.5 MHz				
Number of Channels	11				
Carrier Frequency of Each Channel	2412+(n-1)*5 MHz; n=1~11				
Channel Spacing	5 MHz				
Antenna Type	WLAN Main Antenna: PIFA Antenna with gain 2.8 dBi WLAN Aux. Antenna: PIFA Antenna with gain 2.8 dBi				
Type of Modulation	802.11b : DSSS (BPSK / QPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)				
EUT Stage	Production Unit				

Remark:

- This test report recorded only product characteristics and test results of Digital Transmission System (DTS).
- 2. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

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1.4 Testing Site

Test Site	SPORTON INTERNATIONAL (KUNS	SPORTON INTERNATIONAL (KUNSHAN) INC.					
	No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P.R.C.						
Test Site Location	TEL: +86-0512-5790-0158						
	FAX: +86-0512-5790-0958						
Tool Cita No	Sporton Site No.						
Test Site No.	CO01-KS	03CH01-KS					

1.5 Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15 Subpart C §15.247
- FCC KDB Publication No. 558074 (Measurement Guidelines of DTS)
- ANSI C63.4-2003
- IC RSS-210 Issue 7

Remark:

- 1. All test items were verified and recorded according to the standards and without any deviation during the test.
- 2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B (DoC), recorded in a separate test report.

1.6 Ancillary Equipment List

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Earphone	Intopic	Jazz-278	FCC DoC	Shielded, 2.2 m	Unshielded, 1.8 m
2.	(USB)Mouse	DELL	MO56UC	FCC DoC	Shielded, 1.8 m	N/A
3.	iPod	Apple	A1199	FCC DoC	Shielded, 1.2 m	N/A
4.	Monitor	Q-Bell	L91C	FCC DoC	Shielded, 1.2 m	Unshielded, 1.8 m

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Test Configuration of Equipment Under Test 2

Test Mode 2.1

The EUT has been associated with peripherals pursuant to ANSI C63.4-2003 and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conducted emission (150 kHz to 30 MHz), radiated emission (30 MHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

The following tables are showing the test modes as the worst cases and recorded in this report.

		Test Cases
	802.11b (DSSS)	Mode 1 : 802.11b CH01_2412 MHz in Laptop Mode Mode 2 : 802.11b CH06_2437 MHz in Laptop Mode Mode 3 : 802.11b CH11_2462 MHz in Laptop Mode Mode 4 : 802.11b CH01_2412 MHz in Tablet Mode
Radiated TCs	802.11g/n (OFDM)	Mode 5: 802.11g_CH01_2412 MHz in Laptop Mode Mode 6: 802.11g_CH06_2437 MHz in Laptop Mode Mode 7: 802.11g_CH11_2462 MHz in Laptop Mode Mode 8: 802.11g_CH01_2412 MHz in Tablet Mode Mode 9: 802.11n (BW 20M)_CH01_2412 MHz in Laptop Mode Mode 10: 802.11n (BW 20M)_CH06_2437 MHz in Laptop Mode Mode 11: 802.11n (BW 20M)_CH11_2462 MHz in Laptop Mode Mode 12: 802.11n (BW 20M)_CH01_2412 MHz in Tablet Mode Mode 13: 802.11n (BW 40M)_CH03_2422 MHz in Laptop Mode Mode 14: 802.11n (BW 40M)_CH06_2437 MHz in Laptop Mode Mode 15: 802.11n (BW 40M)_CH06_2452 MHz in Laptop Mode Mode 16: 802.11n (BW 40M)_CH03_2422 MHz in Laptop Mode Mode 16: 802.11n (BW 40M)_CH03_2422 MHz in Tablet Mode
AC Conducted Emission	Mode 1 : \	WLAN Link + Bluetooth Link + Adapter

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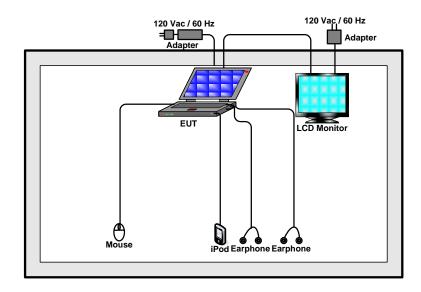
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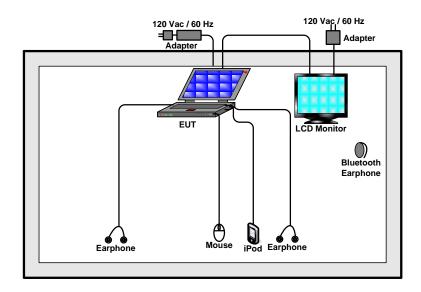


2.2 Connection Diagram of Test System

<Radiation>



<Conduction>



2.3 RF Utility

The programmed RF utility "REALTEK 11n Single Chip" is installed in EUT to provide channel selection, power level, data rate and the application type. RF Utility can send transmitting signal for all testing. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

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3 Test Result

3.1 AC Conducted Emission Measurement

3.1.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of Emission	Conducted Limit (dBuV)				
(MHz)	Quasi-Peak	Average			
0.15-0.5	66 to 56*	56 to 46*			
0.5-5	56	46			
5-30	60	50			

^{*}Decreases with the logarithm of the frequency.

3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

3.1.3 Test Procedures

- 1. The testing follows the guidelines in ANSI C63.4-2003.
- 2. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
- 3. Connect EUT to the power mains through a line impedance stabilization network (LISN).
- 4. All the support units are connecting to the other LISN.
- 5. The LISN provides 50 ohm coupling impedance for the measuring instrument.
- 6. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
- 7. Both sides of AC line were checked for maximum conducted interference.
- 8. The frequency range from 150 kHz to 30 MHz was searched.
- 9. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

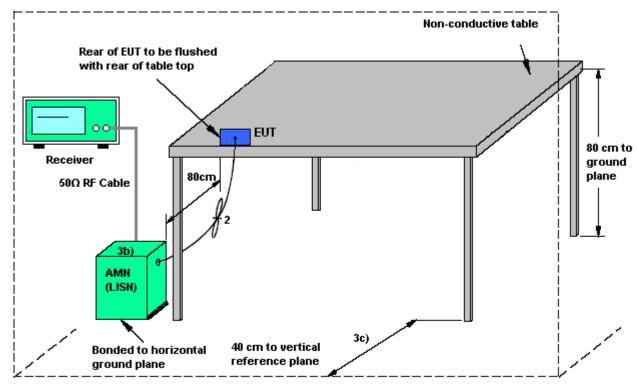
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3.1.4 Test Setup



AMN = Artificial mains network (LISN)

AE = Associated equipment

EUT = Equipment under test

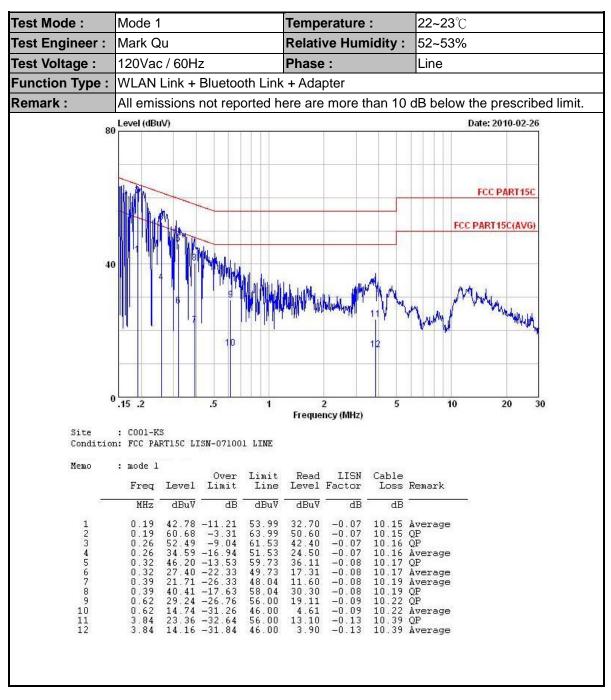
ISN = Impedance stabilization network

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3.1.5 Test Result of AC Conducted Emission



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Test Mode: Mode 1 Temperature: **22~23**℃ Test Engineer: Mark Qu **Relative Humidity:** 52~53% Test Voltage: 120Vac / 60Hz Phase: Neutral Function Type: WLAN Link + Bluetooth Link + Adapter Remark: All emissions not reported here are more than 10 dB below the prescribed limit. 80 Level (dBuV) Date: 2010-02-26 FCC PART 15C FCC PART 15C(AVG) .5 10 20 30 Frequency (MHz) Site : C001-KS Condition: FCC PART15C LISN-071001 NEUTRAL Memo : mode 1 Limit Read LISN Line Level Factor Cable Over Freq Level Limit Loss Remark MHz dB dBuV dBuV dB dB 56 47 -8 03 39 37 -15 13 45 98 -16 85 30 28 -22 55 46 19 -15 53 31 59 -20 13 31 71 -27 04 17 31 -31 44 24 80 -31 20 12 80 -33 20 15 36 -30 64 24 26 -31 74 10.15 QP 10.15 Average 10.15 QP 10.15 Average 10.16 QP 10.16 Average 10.18 QP 10.18 Average 10.31 QP 10.31 Average 10.31 Average 10.38 Average 10.38 OP 64.50 54.50 62.83 52.83 61.72 51.72 58.75 48.75 56.00 46.00 56.00 -0.08 1 2 3 4 5 6 7 8 9 10 0.18 0.22 0.22 0.25 0.25 -0.08 -0.07 29.30 35.90 -0.07 -0.07 -0.07 -0.08 -0.08 -0.11 -0.11 -0.13 20.20 36.10 21.50 21.50 21.61 7.21 14.60 2.60 5.11 14.01 0.36

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3.2 Radiated Emission Measurement

3.2.1 Limit of Radiated Emission

In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the FCC section 15.209 limits as below.

Frequency	Field Strength	Measurement Distance
(MHz)	(microvolts/meter)	(meters)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

3.2.3 Test Procedures

- 1. The testing follows the guidelines in FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
- 2. Use the following spectrum analyzer settings:
 - (1) Span = wide enough to fully capture the emission being measured; RBW = 1 MHz for f ≥ 1 GHz, 100 kHz for f < 1 GHz; VBW ≥ RBW; Sweep = auto; Detector function = peak; Trace = max hold.</p>
 - (2) Above 18 GHz shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade from 3m to 1m.
 - Distance extrapolation factor = 20 log (specific distance [3m] / test distance [1m]) (dB)
- 3. Follow the guidelines in ANSI C63.4-2003 with respect to maximizing the emission by rotating the EUT, measuring the emission for three EUT orthogonal planes, and adjusting the measurement antenna height and polarization. A pre-amp and a high pass filter are used for this test in order to get the good signal level.

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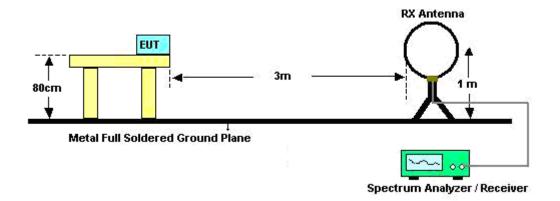
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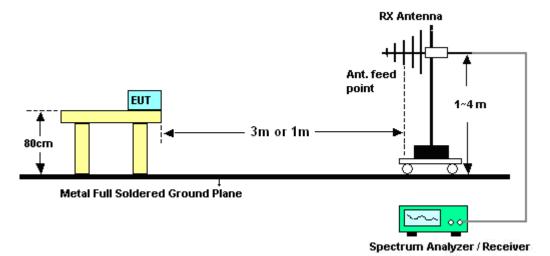
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3.2.4 Test Setup

For radiated emissions below 30MHz



For radiated emissions above 30MHz



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FCC RF Test Report

3.2.5 Test Results of Radiated Emissions (9 kHz ~ 30 MHz)

Test Engineer :	Harvey Tang	Temperature :	23~24 ℃	
		Relative Humidity :	45~46%	

Frequency	Level	Over Limit	Limit Line	Remark
(MHz)	(dBuV)	(dB)	(dBuV)	
-	-	-	-	See Note

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Distance extrapolation factor = 40 log (specific distance / test distance) (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor.

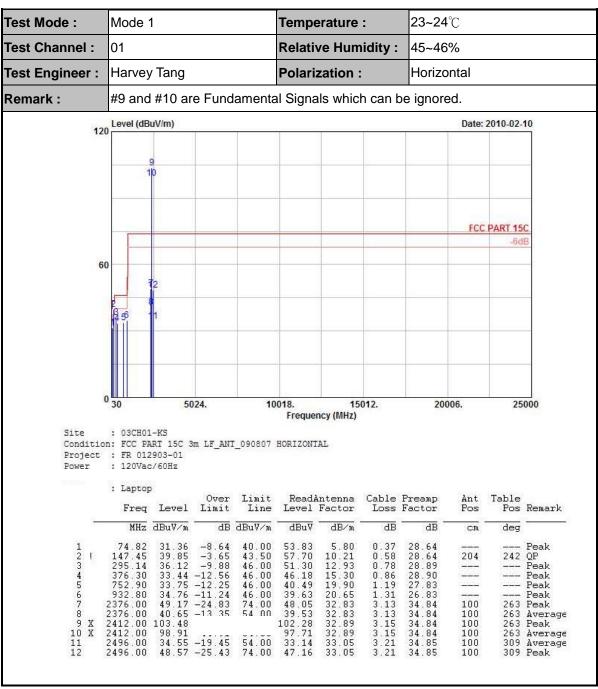
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3.2.6 Test Result of Radiated Emission (30 MHz ~ 10th Harmonic)

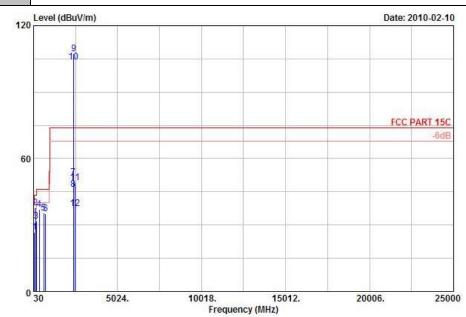


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Test Mode: **23~24**℃ Mode 1 Temperature : Test Channel: 01 45~46% Relative Humidity: Test Engineer: Harvey Tang Polarization: Vertical

Remark: #9 and #10 are Fundamental Signals which can be ignored.



: 03CH01-KS

Condition: FCC PART 15C 3m LF_ANT_090807 VERTICAL Project : FR 012903-01

: 120Vac/60Hz Power

		: Laptor		Over Limit	Limit Line		Antenna Factor		Preamp Factor	Ant Pos	Table Pos	Remark
	1	MHz	$\overline{\mathtt{dBuV/m}}$	dB	$\overline{\mathtt{dBuV/m}}$	dBu∀	dB/m	dB	dB	CM.	deg	
1		75.63	26.77	-13.23	40.00	49.11	5.93	0.37	28.64	-		Peak
2	1	147.45	37.65	-5.85	43.50	55.50	10.21	0.58	28.64	100	68	OP
3		192.00	31.91	-11.59	43.50	51.37	8.59	0.65	28.70			Peak
4		377.70	37.21	-8.79	46.00	49.91	15.34	0.86	28.90		12000	Peak
5		645.80	35.55	-10.45	46.00	43.92	18.88	1.09	28.34			Peak
6		755.70	35.17	-10.83	46.00	41.90	19.90	1.19	27.82			Peak
7		2388.00	51.45	-22.55	74.00	50.30	32.86	3.13	34.84	103	301	Peak
8		2388.00	46.01	-7.99	54.00	44.86	32.86	3.13	34.84	103	301	Average
9	X	2412.00	107.29			106.09	32.89	3.15	34.84	103	301	Peak
10	X	2412.00	103.72			102.52	32.89	3.15	34.84	103	301	Average
11		2494.00	49.04	-24.96	74.00	47.63	33.05	3.21	34.85	100	149	Peak
12		2494.00	37.47	-16.53	54.00	36.06	33.05	3.21	34.85	100	149	Average

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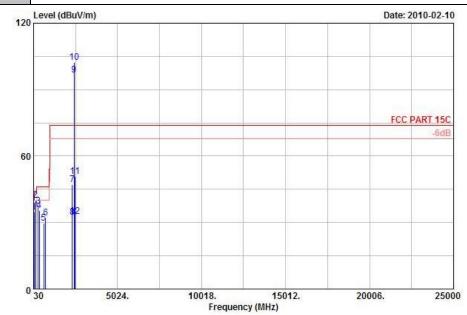
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Test Mode: **23~24**℃ Mode 2 Temperature : 06 Test Channel: 45~46% Relative Humidity: Test Engineer: Harvey Tang Polarization: Horizontal

Remark: #9 and #10 are Fundamental Signals which can be ignored.



Site : 03CH01-KS Condition: FCC PART 15C 3m LF_ANT_090807 HORIZONTAL Project : FR 012903-01 Power : 120Vac/60Hz

		: Lapton		Over Limit	Limit Line		Antenna Factor		Preamp Factor	Ant Pos	Table Pos	Remark
	S.	MHz	$\overline{\mathtt{dBuV/m}}$	dB	dBuV/m	dBuV	dB/m	dB	dB -	CM	deg	
1		72.39	34.63	-5.37	40.00	57.32	5.55	0.37	28.61			Peak
1 2 3 4 5 6 7	1	147.45	40.12	-3.38	43.50	57.97	10.21	0.58	28.64			Peak
3		295.14	37.28	-8.72	46.00	52.46	12.93	0.78	28.89			Peak
4		376.30	35.43	-10.57	46.00	48.17	15.30	0.86	28.90		32000	Peak
5		645.10	29.67	-16.33	46.00	38.04	18.88	1.09	28.34	1000	100000	Peak
6		756.40	32.20	-13.80	46.00	38.92	19.90	1.20	27.82			Peak
7		2332.00	47.11	-26.89	74.00	46.08	32.76	3.10	34.83	100	144	Peak
8		2332.00	32.40	-21.60	54.00	31.37	32.76	3.10	34.83	100	144	Average
9	X	2437.00	96.51			95.23	32.95	3.17	34.84	100	264	Average
10	X	2437.00	102.16			100.88	32.95	3.17	34.84	100		Peak
11		2496.00	50.88	-23.12	74.00	49.47	33.05	3.21	34.85	100	356	Peak
12		2496.00	32.64	-21.36	54.00	31.23	33.05	3.21	34.85	100	356	Average

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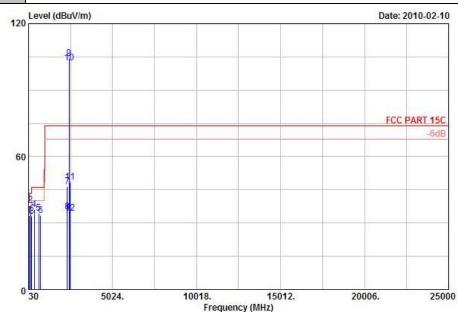


 Test Mode :
 Mode 2
 Temperature :
 23~24°C

 Test Channel :
 06
 Relative Humidity :
 45~46%

 Test Engineer :
 Harvey Tang
 Polarization :
 Vertical

Remark: #9 and #10 are Fundamental Signals which can be ignored.



Site : 03CH01-KS

Condition: FCC PART 15C 3m LF_ANT_090807 VERTICAL Project : FR 012903-01

Project : FR 012903-01 Power : 120Vac/60Hz

		: Laptor		Over Limit	Limit Line		Antenna Factor		Preamp Factor	Ant Pos	Table Pos	Remark
	d.	MHz	$\overline{\mathtt{dBuV/m}}$	dB	$\overline{\mathtt{dBuV/m}}$	dBuV	dB/m	dB	dB -	CM.	deg	
1		54.03	33.36	-6.64	40.00	55.16	6.49	0.33	28.62	3 7777 5		Peak
2	1	147.45	38.23	-5.27	43.50	56.08	10.21	0.58	28.64			Peak
3		221.16	33.19	-12.81	46.00	51.06	10.17	0.69	28.73			Peak
4		376.30	35.97	-10.03	46.00	48.71	15.30	0.86	28.90		12000	Peak
5		645.80	34.29	-11.71	46.00	42.66	18.88	1.09	28.34		100000	Peak
6		753.60	33.31	-12.69	46.00	40.04	19.90	1.19	27.82			Peak
7		2324.00	46.33	-27.67	74.00	45.30	32.76	3.10	34.83	100	121	Peak
8		2324.00	35.17	-18.83	54.00	34.14	32.76	3.10	34.83	100	121	Average
9	X	2437.00	104.34			103.06	32.95	3.17	34.84	131		Peak
10	X	2437.00	102.17			100.89	32.95	3.17	34.84	131	299	Average
11		2492.00	48.37	-25.63	74.00	46.96	33.05	3.21	34.85	100	36	Peak
12		2492.00	34.37	-19.63	54.00	32.96	33.05	3.21	34.85	100	36	Average

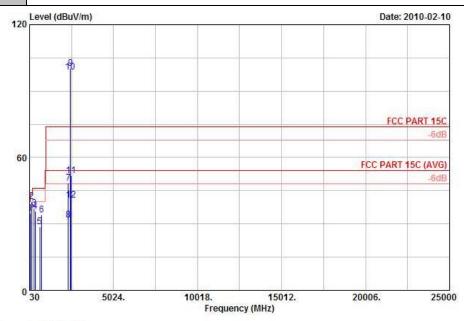
TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958 FCC ID: TX2-RTL8191SE Page Number : 19 of 51
Report Issued Date : Mar. 02, 2010

Report No.: FR021101



Test Mode: **23~24**℃ Mode 3 Temperature : Test Channel: 11 45~46% Relative Humidity: Test Engineer: Harvey Tang Polarization: Horizontal

Remark: #9 and #10 are Fundamental Signals which can be ignored.



Site : 03CH01-KS Condition: FCC PART 15C 3m LF_ANT_090807 HORIZONTAL Project : FR 012903-01 Power : 120Vac/60Hz

:	Laptop

	Freq		Over Limit	Limit Line		Antenna Factor		Preamp Factor	Ant Pos	Table Pos	Remark
<u>-</u>	MHz	$\overline{\mathtt{dBuV/m}}$	dB	$\overline{\mathtt{dBuV/m}}$	dBuV	dB/m	dB		cm	deg	
1 !	72.39	34.60	-5.40	40.00	57.29	5.55	0.37	28.61		-	Peak
2 !	147.45	40.12	-3.38	43.50	57.97	10.21	0.58	28.64			Peak
3	295.14	37.12	-8.88	46.00	52.30	12.93	0.78	28.89	-		Peak
4	376.30	35.91	-10.09	46.00	48.65	15.30	0.86	28.90			Peak
5	645.10	28.71	-17.29	46.00	37.08	18.88	1.09	28.34			Peak
6	752.90	33.96	-12.04	46.00	40.70	19.90	1.19	27.83			Peak
7	2324.00	48.35	-25.65	74.00	47.32	32.76	3.10	34.83	100	124	Peak
8	2324.00	31.61	-22.39	54.00	30.58	32.76	3.10	34.83	100	124	Average
9 X	2462.00	100.44			99.13	32.98	3.18	34.85	132		Peak
0 X	2462.00	98.67			97.36	32.98	3.18	34.85	132	245	Average
.1	2484.00	51.96	-22.04	74.00	50.60	33.01	3.20	34.85	132		Peak
12	2484.00	40.94	-13.06	54.00	39.58	33.01	3.20	34.85	132	245	Average

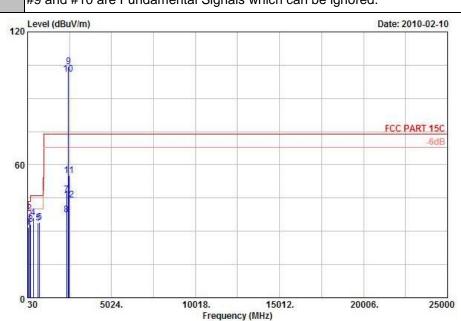
TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958 FCC ID: TX2-RTL8191SE

Page Number : 20 of 51 Report Issued Date: Mar. 02, 2010

Report No.: FR021101



Test Mode: **23~24**℃ Mode 3 Temperature : Test Channel: 11 Relative Humidity: 45~46% Test Engineer: Harvey Tang Polarization: Vertical Remark: #9 and #10 are Fundamental Signals which can be ignored.



Site : 03CH01-KS Condition: FCC PART 15C 3m LF_ANT_090807 VERTICAL Project : FR 012903-01 Power : 120Vac/60Hz

	: Lapton		Over Limit	Limit Line		Antenna Factor		Preamp Factor	Ant Pos	Table Pos	Remark
9	MHz	$\overline{\mathtt{dBuV/m}}$	dB	$\overline{\mathtt{dBuV/m}}$	dBuV	dB/m	dB	dB	CM	deg	
1	54.03	31.62	-8.38	40.00	53.42	6.49	0.33	28.62			Peak
2 !	147.45	38.14	-5.36	43.50	55.99	10.21	0.58	28.64			Peak
2 ! 3 4 5 6 7	221.16	33.11	-12.89	46.00	50.98	10.17	0.69	28.73			Peak
4	376.30	35.98	-10.02	46.00	48.72	15.30	0.86	28.90		-	Peak
5	647.90	33.65	-12.35	46.00	41.99	18.89	1.10	28.33			Peak
6	756.40	34.11	-11.89	46.00	40.83	19.90	1.20	27.82		-	Peak
7	2344.00	46.31	-27.69	74.00	45.24	32.78	3.12	34.83	100	234	Peak
8	2344.00	37.28	-16.72	54.00	36.21	32.78	3.12	34.83	100	234	Average
9 X	2462.00	104.23			102.92	32.98	3.18	34.85	131	296	Peak
10 X	2462.00	100.95			99.64	32.98	3.18	34.85	131	296	Average
11	2484.00	55.31	-18.69	74.00	53.95	33.01	3.20	34.85	131	296	Peak
12	2484.00	44.19	-9.81	54.00	42.83	33.01	3.20	34.85	131	296	Average

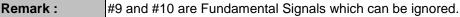
TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958 FCC ID: TX2-RTL8191SE

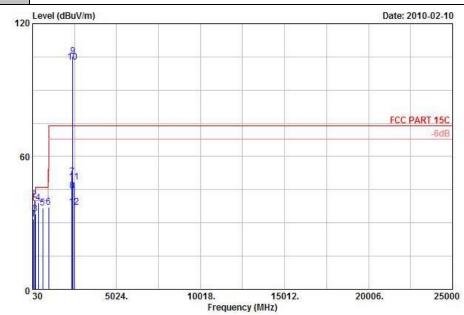
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Report No.: FR021101



Test Mode: **23~24**℃ Mode 4 Temperature : Test Channel: 01 45~46% Relative Humidity: Test Engineer: Harvey Tang Polarization: Horizontal





Site : 03CH01-KS Condition: FCC PART 15C 3m LF_ANT_090807 HORIZONTAL Project : FR 012903-01 Power : 120Vac/60Hz

: Tablet E1 plane

	Freq	Level	Over Limit	Limit Line		Antenna Factor		Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	$\overline{\mathtt{dBuV/m}}$	dBuV	_dB/m	dB		CM CM	deg	
1	73.74	31.71	-8.29	40.00	54.29	5.68	0.37	28.63	4000	-	Peak
2 !	147.45	40.55	-2.95	43.50	58.40	10.21	0.58	28.64	194	378	QP
3	192.00	34.16	-9.34	43.50	53.62	8.59	0.65	28.70			Peak
4	377.70	39.19	-6.81	46.00	51.89	15.34	0.86	28.90			Peak
5	645.80	36.81	-9.19	46.00	45.18	18.88	1.09	28.34	-		Peak
6	996.50	37.16	-16.84	54.00	41.16	21.08	1.35	26.43			Peak
7	2386.00	50.81	-23.19	74.00	49.66	32.86	3.13	34.84	178	262	Peak
8	2386.00	44.61	-9.39	54.00	43.46	32.86	3.13	34.84	178	262	Average
9 X	2412.00	105.39			104.19	32.89	3.15	34.84	178		Peak
10 X	2412.00	102.77			101.57	32.89	3.15	34.84	178	262	Average
11	2494.00	48.45	-25.55	74.00	47.04	33.05	3.21	34.85	100		Peak
12	2494.00	37.12	-16.88	54.00	35.71	33.05	3.21	34.85	100	134	Average

TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958 FCC ID: TX2-RTL8191SE

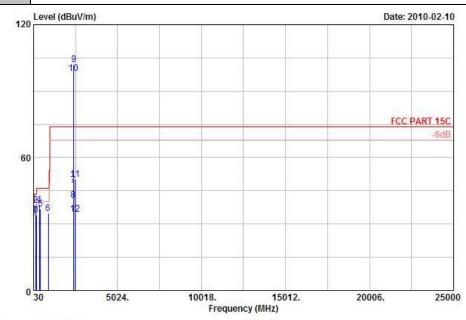
Page Number : 22 of 51 Report Issued Date: Mar. 02, 2010

Report No.: FR021101



Test Mode: **23~24**℃ Mode 4 Temperature : Test Channel: 01 45~46% Relative Humidity: Test Engineer: Harvey Tang Polarization: Vertical

Remark: #9 and #10 are Fundamental Signals which can be ignored.



: 03CH01-KS Site

Condition: FCC PART 15C 3m LF_ANT_090807 VERTICAL Project : FR 012903-01

: 120Vac/60Hz Power

: Tablet E1 plane

	I	req	Leve		ver mit			Antenna Factor		Preamp Factor	Ant Pos	Table Pos	Remark
		MHz	dBuV/	m —	dB	dBuV/m	dBuV	dB/m	dB	dB	CM	deg	-
1 !	48	3.09	34.0	8 –5	.92	40.00	54.28	8.12	0.31	28.63			Peak
2 !	147	7.45	38.3	4 -5	.16	43.50	56.19	10.21	0.58	28.64		10000	Peak
3	192	2.00	33.9	4 -9	.56	43.50	53.40	8.59	0.65	28.70			Peak
4	377	7.70	38.8	3 -7	.17	46.00	51.53	15.34	0.86	28.90		32000	Peak
5	431	L.60	36.7	7 -9	.23	46.00	48.60	16.20	0.90	28.93	10000	22000	Peak
5	897	7.80	34.6	6 -11	.34	46.00	39.97	20.45	1.29	27.05			Peak
7	2388	3.00	47.3	6 -26	.64	74.00	46.21	32.86	3.13	34.84	100	196	Peak
8	2388	3.00	40.6	4 - 13	.36	54.00	39.49	32.86	3.13	34.84	100	196	Average
9 X	2412	2.00	102.0	8			100.88	32.89	3.15	34.84	100		Peak
LO X	2412	2.00	98.1	0			96.90	32.89	3.15	34.84	100	196	Average
1	2496	5.00	50.0	0 - 24	.00	74.00	48.59	33.05	3.21	34.85	100		Peak
12	2496	5.00	34.3	6 -19	.64	54.00	32.95	33.05	3.21	34.85	100	325	Average

TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958 FCC ID: TX2-RTL8191SE

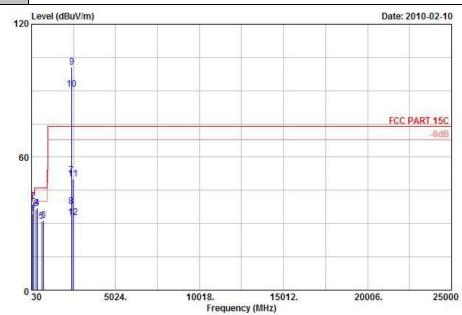
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Test Mode: **23~24**℃ Mode 5 Temperature : Test Channel: 01 45~46% Relative Humidity: Test Engineer: Harvey Tang Polarization: Horizontal

Remark: #9 and #10 are Fundamental Signals which can be ignored.



Site : 03CH01-KS

Condition: FCC PART 15C 3m LF_ANT_090807 HORIZONTAL Project : FR 012903-01

: 120Vac/60Hz Power

T.a	pt	on

	Freq	Level	Over Limit	Limit Line		Antenna Factor		Preamp Factor	Ant Pos	Table Pos	Remark
<u> </u>	MHz	$\overline{\mathtt{dBuV/m}}$	d B	$\overline{\mathtt{dBuV/m}}$	dBuV	_dB/m	dB		CM	deg	-
1!	72.39	34.44	-5.56	40.00	57.13	5.55	0.37	28.61			Peak
2 !	147.45	40.24	-3.26	43.50	58.09	10.21	0.58	28.64		0.011011076	Peak
3	295.14	36.85	-9.15	46.00	52.03	12.93	0.78	28.89			Peak
4	376.30	37.02	-8.98	46.00	49.76	15.30	0.86	28.90			Peak
5	645.10	30.92	-15.08	46.00	39.29	18.88	1.09	28.34			Peak
6	755.70	31.51	-14.49	46.00	38.24	19.90	1.19	27.82	2.		Peak
7	2390.00	51.82	-22.18	74.00	50.65	32.86	3.15	34.84	100	264	Peak
8	2390.00	37.92	-16.08	54.00	36.75	32.86	3.15	34.84	100	264	Average
9 X	2412.00	100.61			99.41	32.89	3.15	34.84	100		Peak
LO X	2412.00	90.62			89.42	32.89	3.15	34.84	100	264	Average
11	2492.00	50.02	-23.98	74.00	48.61	33.05	3.21	34.85	100		Peak
12	2492.00	32.78	-21.22	54.00	31.37	33.05	3.21	34.85	100	23	Average

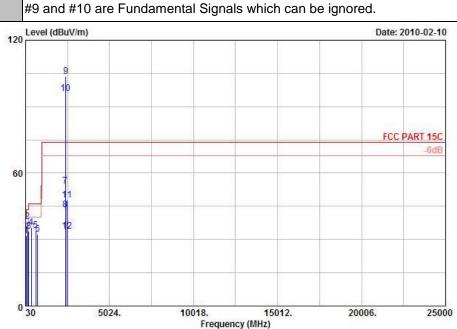
TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958 FCC ID: TX2-RTL8191SE

Page Number : 24 of 51 Report Issued Date: Mar. 02, 2010

Report No.: FR021101



Test Mode: **23~24**℃ Mode 5 Temperature : Test Channel: 01 45~46% Relative Humidity: Test Engineer: Harvey Tang Polarization: Vertical Remark:



Site : 03CH01-KS Condition: FCC PART 15C 3m LF_ANT_090807 VERTICAL Project : FR 012903-01 Power : 120Vac/60Hz

	: Laptor	0	0	+3234	Dec. 1	18071281728	C-11-	9 - 2002-2003-0	10.4	T-11-	
	Freq	Level	Over Limit	Limit Line		Antenna Factor		Preamp Factor	Ant Pos	Table Pos	Remark
<u> </u>	MHz	$\overline{\mathtt{dBuV/m}}$	dB	$\overline{\mathtt{dBuV/m}}$	dBuV	dB/m	dB	dB	cm	deg	
1	54.03	31.68	-8.32	40.00	53.48	6.49	0.33	28.62			Peak
2!	147.45	38.20	-5.30	43.50	56.05	10.21	0.58	28.64	STITLE S	9000	Peak
3	221.16	33.90	-12.10	46.00	51.77	10.17	0.69	28.73		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 	Peak
4 5 6	376.30	35.52	-10.48	46.00	48.26	15.30	0.86	28.90			Peak
5	646.50	34.22	-11.78	46.00	42.58	18.89	1.09	28.34			Peak
6	756.40	32.43	-13.57	46.00	39.15	19.90	1.20	27.82	2000		Peak
7	2390.00	54.20	-19.80	74.00	53.03	32.86	3.15	34.84	134	300	Peak
8	2390.00	43.54	-10.46	54.00	42.37	32.86	3.15	34.84	134	300	Average
9 X	2412.00	103.56			102.36	32.89	3.15	34.84	134		Peak
10 X	2412.00	96.07			94.87	32.89	3.15	34.84	134	300	Average
11	2498.00	47.64	-26.36	74.00	46.23	33.05	3.21	34.85	100		Peak
12	2498.00	33.76	-20.24	54.00	32.35	33.05	3.21	34.85	100	39	Average

TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958 FCC ID: TX2-RTL8191SE

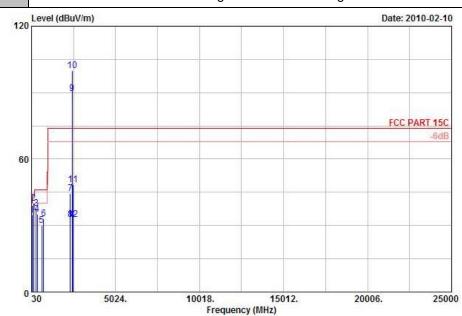
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Report No.: FR021101



Test Mode: **23~24**℃ Mode 6 Temperature : Test Channel: 06 45~46% Relative Humidity: Test Engineer: Harvey Tang Polarization: Horizontal

Remark: #9 and #10 are Fundamental Signals which can be ignored.



Site : 03CH01-KS Condition: FCC PART 15C 3m LF_ANT_090807 HORIZONTAL Project : FR 012903-01 Power : 120Vac/60Hz

		: Lapton	Level	Over Limit	Limit Line		Antenna Factor		Preamp Factor	Ant Pos	Table Pos	Remark
	, T	MHz	$\overline{\mathtt{dBuV/m}}$	dB	dBuV/m	dBuV	dB/m	dB	dB -	CM.	deg	
1		72.39	34.62	-5.38	40.00	57.31	5.55	0.37	28.61			Peak
2		147.45	40.09	-3.41	43.50	57.94	10.21	0.58	28.64			Peak
3		295.14	37.83	-8.17	46.00	53.01	12.93	0.78	28.89			Peak
4 5 6 7		377.70	35.15	-10.85	46.00	47.85	15.34	0.86	28.90			Peak
5		645.10	29.92	-16.08	46.00	38.29	18.88	1.09	28.34	122		Peak
6		756.40	33.14	-12.86	46.00	39.86	19.90	1.20	27.82			Peak
7		2332.00	44.59	-29.41	74.00	43.56	32.76	3.10	34.83	100	126	Peak
8		2332.00	32.68	-21.32	54.00	31.65	32.76	3.10	34.83	100	126	Average
9	X	2437.00	89.62			88.34	32.95	3.17	34.84	100		Average
10	X	2437.00	100.05			98.77	32.95	3.17	34.84	100		Peak
11		2498.00	48.55	-25.45	74.00	47.14	33.05	3.21	34.85	100	256	Peak
12		2498.00	32.82	-21.18	54.00	31.41	33.05	3.21	34.85	100	256	Average

TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958 FCC ID: TX2-RTL8191SE

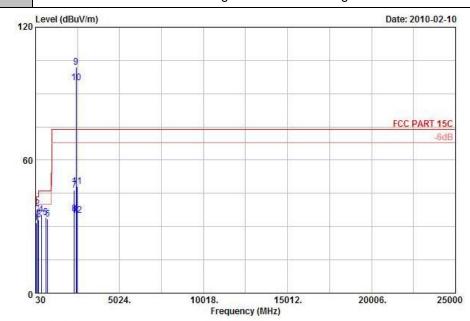
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Report No.: FR021101



Test Mode: **23~24**℃ Mode 6 Temperature : 06 Test Channel: 45~46% Relative Humidity: Test Engineer: Harvey Tang Polarization: Vertical

Remark: #9 and #10 are Fundamental Signals which can be ignored.



Site : 03CH01-KS Condition: FCC PART 15C 3m LF_ANT_090807 VERTICAL Project : FR 012903-01

: 120Vac/60Hz Power

		Freq	Level	Over Limit	Limit Line		Antenna Factor		Preamp Factor	Ant Pos	Table Pos	Remark
	1	MHz	$\overline{\mathtt{dBuV/m}}$	dB	dBuV/m	dBuV	dB/m	dB	dB -	©M	deg	
1		54.03	31.74	-8.26	40.00	53.54	6.49	0.33	28.62			Peak
1 2		147.45	38.09	-5.41	43.50	55.94	10.21	0.58	28.64		7 2 2	Peak
3		221.16	33.18	-12.82	46.00	51.05	10.17	0.69	28.73			Peak
3 4 5		377.00	35.35	-10.65	46.00	48.05	15.34	0.86	28.90	<u> </u>		Peak
5		645.80	33.94	-12.06	46.00	42.31	18.88	1.09	28.34	<u> </u>	12000	Peak
6 7		752.90	33.34	-12.66	46.00	40.08	19.90	1.19	27.83			Peak
7		2328.00	46.58	-27.42	74.00	45.55	32.76	3.10	34.83	100	345	Peak
8		2328.00	35.63	-18.37	54.00	34.60	32.76	3.10	34.83	100	345	Average
9	X	2437.00	101.94			100.66	32.95	3.17	34.84	131		Peak
10	X	2437.00	95.03			93.75	32.95	3.17	34.84	131	300	Average
11		2496.00	48.08	-25.92	74.00	46.67	33.05	3.21	34.85	100		Peak
12		2496.00	34.97	-19.03	54.00	33.56	33.05	3.21	34.85	100	31	Average

TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958 FCC ID: TX2-RTL8191SE

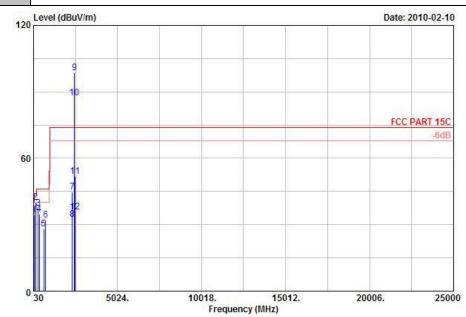
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Report No.: FR021101



Test Mode: **23~24**℃ Mode 7 Temperature : Test Channel: 11 45~46% Relative Humidity: Test Engineer: Harvey Tang Polarization: Horizontal

Remark: #9 and #10 are Fundamental Signals which can be ignored.



Site : 03CH01-KS Condition: FCC PART 15C 3m LF_ANT_090807 HORIZONTAL Project : FR 012903-01

: 120Vac/60Hz Power

		: Laptor	>									
		Freq	Level	Over Limit	Limit Line		Antenna Factor		Preamp Factor	Ant Pos	Table Pos	Remark
	-	MHz	$\overline{\mathtt{dBuV/m}}$	dB	$\overline{\mathtt{dBuV/m}}$	dBuV	dB/m	dB	dB	CM.	deg	-
1	1	72.39	34.29	-5.71	40.00	56.98	5.55	0.37	28.61			Peak
2	13	147.45	40.08	-3.42	43.50	57.93	10.21	0.58	28.64		-	Peak
3		295.14	37.28	-8.72	46.00	52.46	12.93	0.78	28.89			Peak
4		377.00	34.89	-11.11	46.00	47.59	15.34	0.86	28.90		1	Peak
5		645.80	28.00	-18.00	46.00	36.37	18.88	1.09	28.34	-		Peak
6		752.90	32.07	-13.93	46.00	38.81	19.90	1.19	27.83			Peak
6		2326.00	44.75	-29.25	74.00	43.72	32.76	3.10	34.83	100	0	Peak
8		2326.00	32.33	-21.67	54.00	31.30	32.76	3.10	34.83	100	0	Average
9	X	2462.00	98.68			97.37	32.98	3.18	34.85	100		Peak
10	X	2462.00	87.22			85.91	32.98	3.18	34.85	100	269	Average
11		2484.00	51.92	-22.08	74.00	50.56	33.01	3.20	34.85	100		Peak
12		2484.00	35.87	-18.13	54.00	34.51	33.01	3.20	34.85	100		Average

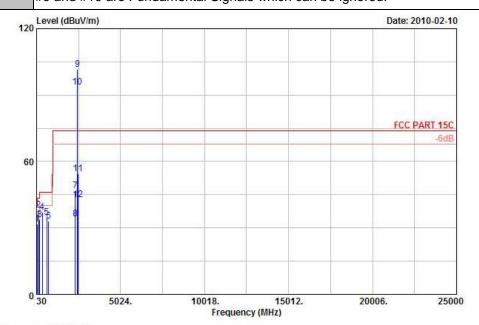
TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958 FCC ID: TX2-RTL8191SE

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Report No.: FR021101



Test Mode: **23~24**℃ Mode 7 Temperature : Test Channel: 11 Relative Humidity: 45~46% Test Engineer: Harvey Tang Polarization: Vertical Remark: #9 and #10 are Fundamental Signals which can be ignored.



Site : 03CH01-KS Condition: FCC PART 15C 3m LF_ANT_090807 VERTICAL Project : FR 012903-01 Power : 120Vac/60Hz

	Freq	Level	Over Limit	Limit Line		Antenna Factor		Preamp Factor	Ant Pos	Table Pos	Remark
₹ <u>.</u>	MHz	$\overline{\mathtt{dBuV/m}}$	dB	dBuV/m	dBuV	dB/m	dB	dB -	cm	deg	
1	54.03	31.79	-8.21	40.00	53.59	6.49	0.33	28.62			Peak
2 !	147.45	37.98	-5.52	43.50	55.83	10.21	0.58	28.64	7		Peak
3	221.16	33.63	-12.37	46.00	51.50	10.17	0.69	28.73			Peak
3 4 5 6	376.30	37.06	-8.94	46.00	49.80	15.30	0.86	28.90		32000	Peak
5	645.10	34.65	-11.35	46.00	43.02	18.88	1.09	28.34		-	Peak
6	756.40	32.99	-13.01	46.00	39.71	19.90	1.20	27.82			Peak
7	2330.00	46.85	-27.15	74.00	45.82	32.76	3.10	34.83	100	89	Peak
8	2330.00	34.18	-19 82	54 00	33.15	32.76	3.10	34.83	100	89	Average
9 X	2462.00	101.59			100.28	32.98	3.18	34.85	100		Peak
10 X	2462.00	93.63			92.32	32.98	3.18	34.85	100	301	Average
11	2484.00	54.37	-19.63	74.00	53.01	33.01	3.20	34.85	100		Peak
12	2484.00	42.66	-11.34	54.00	41.30	33.01	3.20	34.85	100	301	Average

TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958 FCC ID: TX2-RTL8191SE

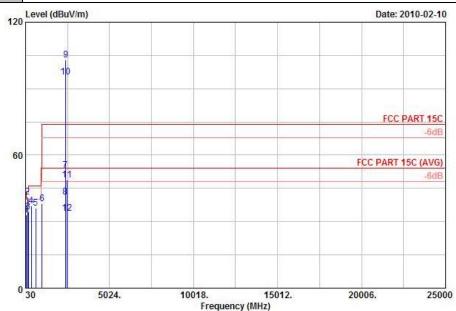
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Report No.: FR021101



Test Mode: **23~24**℃ Mode 8 Temperature : Test Channel: 01 45~46% Relative Humidity: Test Engineer: Harvey Tang Polarization: Horizontal





Site : 03CH01-KS Condition: FCC PART 15C 3m LF_ANT_090807 HORIZONTAL Project : FR 012903-01

: 120Vac/60Hz Power

: Tablet E1 plane

	Freq	Level	Over Limit	Limit Line		Antenna Factor		Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	$\overline{\mathtt{dBuV/m}}$	dB	$\overline{\mathtt{dBuV/m}}$	dBuV	dB/m	dB	dB -	CM.	deg	
1	73.74	33.26	-6.74	40.00	55.84	5.68	0.37	28.63		-	Peak
2 !	147.45	41.15	-2.35	43.50	59.00	10.21	0.58	28.64	200	279	QP
3	192.00	34.56	-8.94	43.50	54.02	8.59	0.65	28.70			Peak
4	376.30	37.16	-8.84	46.00	49.90	15.30	0.86	28.90	3 <u>11111</u>		Peak
5	645.80	36.01	-9.99	46.00	44.38	18.88	1.09	28.34	<u> </u>	12000	Peak
6 7	999.30	37.96	-16.04	54.00	41.93	21.10	1.35	26.42	2 <u>-1-1-1</u> 3		Peak
7	2390.00	53.23	-20.77	74.00	52.06	32.86	3.15	34.84	177	265	Peak
8	2390.00	41.07	-12.93	54.00	39.90	32.86	3.15	34.84	177	265	Average
9 X	2412.00	102.96			101.76	32.89	3.15	34.84	177		Peak
10 X	2412.00	95.42			94.22	32.89	3.15	34.84	177	265	Average
11	2492.00	48.83	-25.17	74.00	47.42	33.05	3.21	34.85	100		Peak
12	2492.00	33.88	-20.12	54.00	32.47	33.05	3.21	34.85	100	14	Average

TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958 FCC ID: TX2-RTL8191SE

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Report No.: FR021101

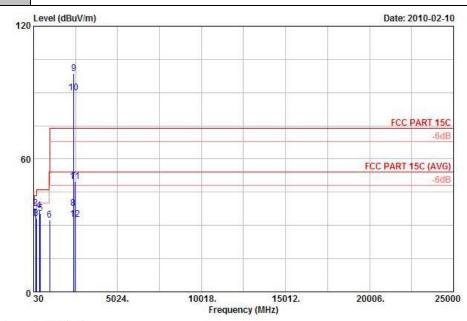


 Test Mode :
 Mode 8
 Temperature :
 23~24°C

 Test Channel :
 01
 Relative Humidity :
 45~46%

 Test Engineer :
 Harvey Tang
 Polarization :
 Vertical

Remark: #9 and #10 are Fundamental Signals which can be ignored.



Site : 03CH01-KS

Condition: FCC PART 15C 3m LF_ANT_090807 VERTICAL

Project : FR 012903-01 Power : 120Vac/60Hz

: Tablet E1 plane

		Freq	Level	Over Limit	Limit Line		Antenna Factor		Preamp Factor	Ant Pos	Table Pos	Remark
	-	MHz	$\overline{\mathtt{dBuV/m}}$	dB	$\overline{\mathtt{dBuV/m}}$	dBuV	dB/m	dB	dB _		deg	
1		48.09	33.39	-6.61	40.00	53.59	8.12	0.31	28.63	100	248	QP
2 !		147.45	37.85	-5.65	43.50	55.70	10.21	0.58	28.64	105	64	QP
3		192.00	33.08	-10.42	43.50	52.54	8.59	0.65	28.70			Peak
4		377.70	36.77	-9.23	46.00	49.47	15.34	0.86	28.90			Peak
5		431.60	35.37	-10.63	46.00	47.20	16.20	0.90	28.93	-	1	Peak
1 2 3 4 5 6 7		996.50	32.56	-21.44	54.00	36.56	21.08	1.35	26.43		-	Peak
7		2390.00	50.22	-23.78	74.00	49.05	32.86	3.15	34.84	100	196	Peak
8		2390.00	37.87	-16.13	54.00	36.70	32.86	3.15	34.84	100	196	Average
9 1	7	2412.00	98.56			97.36	32.89	3.15	34.84	100		Peak
10 3	7	2412.00	89.83			88.63	32.89	3 15	34.84	100		Average
11		2496.00	49 74	-24.26	74.00	48.33	33.05	3.21	34.85	100		Peak
12		2496.00		-21.28	54.00	31.31	33.05	3.21	34.85	100		Average

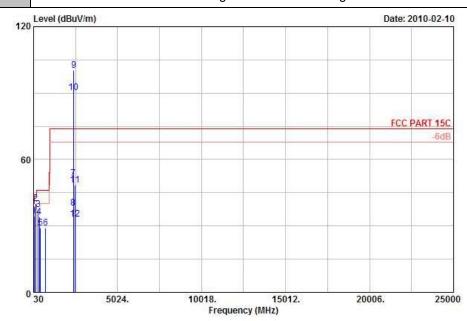
TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958 FCC ID: TX2-RTL8191SE Page Number : 31 of 51
Report Issued Date : Mar. 02, 2010

Report No.: FR021101



23~24℃ Test Mode: Mode 9 Temperature: Test Channel: 01 Relative Humidity: 45~46% Harvey Tang Horizontal Test Engineer: Polarization:

Remark: #9 and #10 are Fundamental Signals which can be ignored.



: 03CH01-KS Site

Condition: FCC PART 15C 3m LF_ANT_090807 HORIZONTAL Project : FR 012903-01 Power : 120Vac/60Hz

	: Lapton	р	2000 50400000 20	a sandan da ana ana ana ana ana ana ana ana	20.000.000.000		200000000000000000000000000000000000000	managen scanner acce	3991 010 1001	0.0000000000000000000000000000000000000	
	Freq	Level	Over Limit	Limit Line		Antenna Factor		Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	$\overline{\mathtt{dBuV/m}}$	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	10
1 !	72.39	34.41	-5.59	40.00	57.10	5.55	0.37	28.61		-	Peak
2 !	147.45	39.95	-3.55	43.50	57.80	10.21	0.58	28.64			Peak
1 ! 2 3 4 5 6	295.14	37.49	-8.51	46.00	52.67	12.93	0.78	28.89			Peak
4	377.70	34.13	-11.87	46.00	46.83	15.34	0.86	28.90			Peak
5	430.20	29.06	-16.94	46.00	40.89	16.20	0.90	28.93			Peak
6	756.40	29.11	-16.89	46.00	35.83	19.90	1.20	27.82	(1000000)		Peak
7	2390.00	51.54	-22.46	74.00	50.37	32.86	3.15	34.84	100	264	Peak
8	2390.00	38.09	-15.91	54.00	36.92	32.86	3.15	34.84	100	264	Average
9 X	2412.00	100.32			99.12	32.89	3.15	34.84	100		Peak
10 X	2412.00	90.32			89.12	32.89	3.15	34.84	100	264	Average
11	2494.00	48.55	-25.45	74.00	47.14	33.05	3.21	34.85	100	142	Peak
12	2494.00	33.09	-20.91	54.00	31.68	33.05	3.21	34.85	100	142	Average

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958 FCC ID: TX2-RTL8191SE

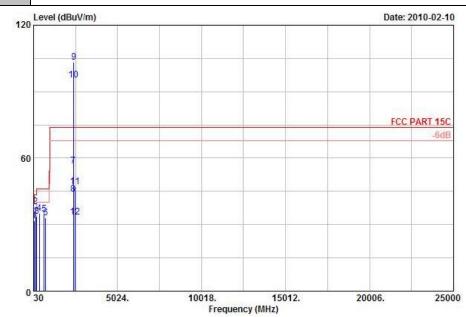
Page Number : 32 of 51 Report Issued Date: Mar. 02, 2010

Report No.: FR021101



Test Mode: **23~24**℃ Mode 9 Temperature : Test Channel: 01 Relative Humidity: 45~46% Test Engineer: Harvey Tang Polarization: Vertical

Remark: #9 and #10 are Fundamental Signals which can be ignored.



Site : 03CH01-KS Condition: FCC PART 15C 3m LF_ANT_090807 VERTICAL Project : FR 012903-01

: 120Vac/60Hz Power

		: Laptor	Level	Over Limit	Limit Line		Antenna Factor		Preamp Factor	Ant Pos	Table Pos	Remark
	ŧ	MHz	$\overline{\mathtt{dBuV/m}}$	— dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	-
1		54.03	31.62	-8.38	40.00	53.42	6.49	0.33	28.62	1,000,000	, 1000000	Peak
2		147.45	38.13	-5.37	43.50	55.98	10.21	0.58	28.64			Peak
3		221.16	33.67	-12.33	46.00	51.54	10.17	0.69	28.73			Peak
4		376.30	35.25	-10.75	46.00	47.99	15.30	0.86	28.90	3 <u>2222</u>		Peak
5		647.90	34.84	-11.16	46.00	43.18	18.89	1.10	28.33	<u> </u>	12000	Peak
6 7		752.90	33.17	-12.83	46.00	39.91	19.90	1.19	27.83			Peak
7		2390.00	56.37	-17.63	74.00	55.20	32.86	3.15	34.84	105	302	Peak
8		2390.00	43.69	-10.31	54.00	42.52	32.86	3.15	34.84	105	302	Average
9 1	X	2412.00	103.41			102.21	32.89	3.15	34.84	105	302	Peak -
10 2	X	2412.00	95.28			94.08	32.89	3.15	34.84	105	302	Average
11		2494.00	46.97	-27.03	74.00	45.56	33.05	3.21	34.85	100	211	Peak
12		2494.00	33.38	-20.62	54.00	31.97	33.05	3.21	34.85	100	211	Average

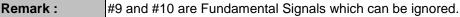
TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958 FCC ID: TX2-RTL8191SE

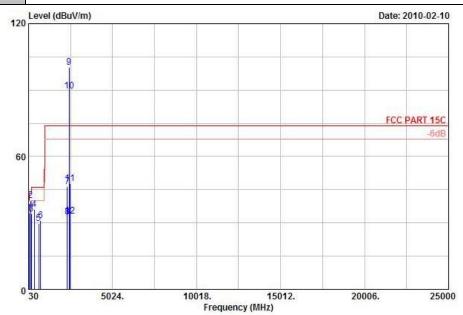
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Test Mode: **23~24**℃ Mode 10 Temperature : 06 Test Channel: Relative Humidity: 45~46% Test Engineer: Harvey Tang Polarization: Horizontal





Site : 03CH01-KS Condition: FCC PART 15C 3m LF_ANT_090807 HORIZONTAL Project : FR 012903-01 Power : 120Vac/60Hz

		: Laptor		12000						240		
		Freq	Level	Over Limit	Limit Line		Antenna Factor		Preamp Factor	Ant Pos	Table Pos	Remark
	1	MHz	$\overline{\mathtt{dBuV/m}}$	dB	dBuV/m	dBuV	dB/m	dB	dB	CM.	deg	
1	1	72.39	34.40	-5.60	40.00	57.09	5.55	0.37	28.61		-	Peak
2		147.45	40.11	-3.39	43.50	57.96	10.21	0.58	28.64			Peak
3		201.45	34.11	-9.39	43.50	53.08	9.08	0.66	28.71			Peak
4		376.30	36.05	-9.95	46.00	48.79	15.30	0.86	28.90			Peak
4 5 6		646.50	29.72	-16.28	46.00	38.08	18.89	1.09	28.34	1000	1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	Peak
6		756.40	31.14	-14.86	46.00	37.86	19.90	1.20	27.82			Peak
7		2326.00	46.57	-27.43	74.00	45.54	32.76	3.10	34.83	100	19	Peak
8		2326.00	32.81	-21.19	54.00	31.78	32.76	3.10	34.83	100	19	Average
9	X	2437.00	100.13			98.85	32.95	3.17	34.84	100	264	Peak
10	X	2437.00	89.42			88.14	32.95	3.17	34.84	100	264	Average
11		2496.00	47.77	-26.23	74.00	46.36	33.05	3.21	34.85	100		Peak
12		2496.00	32.97	-21.03	54.00	31.56	33.05	3.21	34.85	100	346	Average

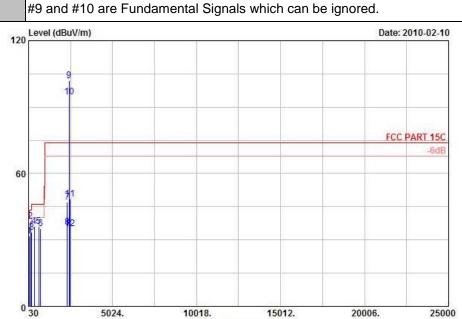
TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958 FCC ID: TX2-RTL8191SE

Page Number : 34 of 51 Report Issued Date: Mar. 02, 2010

Report No.: FR021101



Test Mode: **23~24**℃ Mode 10 Temperature : 06 Test Channel: Relative Humidity: 45~46% Test Engineer: Harvey Tang Polarization: Vertical Remark:



Site : 03CH01-KS Condition: FCC PART 15C 3m LF_ANT_090807 VERTICAL Project : FR 012903-01 Power : 120Vac/60Hz

		: Laptor	Level	Over Limit	Limit Line		Antenna Factor		Preamp Factor	Ant Pos	Table Pos	Remark
	90	MHz	$\overline{\mathtt{dBuV/m}}$	dB	$\overline{\mathtt{dBuV/m}}$	dBuV	_dB/m	dB	dB _	CM CM	deg	
1		54.03	31.76	-8.24	40.00	53.56	6.49	0.33	28.62	4000	-	Peak
2	100	147.45	38.30	-5.20	43.50	56.15	10.21	0.58	28.64			Peak
3		221.16	33.32	-12.68	46.00	51.19	10.17	0.69	28.73			Peak
4		376.30	36.20	-9.80	46.00	48.94	15.30	0.86	28.90			Peak
4 5 6 7		646.50	35.95	-10.05	46.00	44.31	18.89	1.09	28.34			Peak
6		755.70	34.97	-11.03	46.00	41.70	19.90	1.19	27.82	(Peak
7		2332.00	47.27	-26.73	74.00	46.24	32.76	3.10	34.83	100	213	Peak
8		2332.00	35.89	-18.11	54.00	34.86	32.76	3.10	34.83	100	213	Average
9	X	2437.00	102.06			100.78	32.95	3.17	34.84	132	300	Peak
10	X	2437.00	94.59			93.31	32.95	3.17	34.84	132	300	Average
11		2498.00	48.45	-25.55	74.00	47.04	33.05	3.21	34.85	100		Peak
12		2498.00	35.01	-18.99	54.00	33.60	33.05	3.21	34.85	100	61	Average

Frequency (MHz)

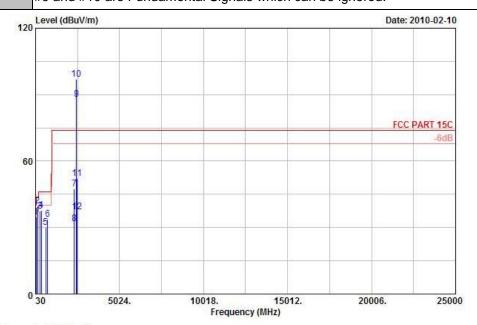
TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958 FCC ID: TX2-RTL8191SE

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Report No.: FR021101



Test Mode: **23~24**℃ Mode 11 Temperature : Test Channel: 11 45~46% Relative Humidity: Test Engineer: Harvey Tang Polarization: Horizontal Remark: #9 and #10 are Fundamental Signals which can be ignored.



Site : 03CH01-KS Condition: FCC PART 15C 3m LF_ANT_090807 HORIZONTAL Project : FR 012903-01 Power : 120Vac/60Hz

		: Lapton		Over Limit	Limit Line		Antenna Factor		Preamp Factor	Ant Pos	Table Pos	Remark
	i.	MHz	dBuV/m	dB	$\overline{\mathtt{dBuV/m}}$	dBuV	dB/m	dB	dB	cm	deg	-
1		72.39	34.65	-5.35	40.00	57.34	5.55	0.37	28.61			Peak
2		147.45	39.94	-3.56	43.50	57.79	10.21	0.58	28.64			Peak
3		295.14	37.31	-8.69	46.00	52.49	12.93	0.78	28.89			Peak
2 3 4		376.30	37.69	-8.31	46.00	50.43	15.30	0.86	28.90	-		Peak
5		645.10	30.08	-15.92	46.00	38.45	18.88	1.09	28.34	1000	10000	Peak
5 6 7		756.40	33.70	-12.30	46.00	40.42	19.90	1.20	27.82			Peak
7		2332.00	47.59	-26.41	74.00	46.56	32.76	3.10	34.83	100	10	Peak
8		2332.00	31.68	-22.32	54.00	30.65	32.76	3.10	34.83	100	10	Average
9	X	2462.00	87.75			86.44	32.98	3.18	34.85	103		Average
10	X	2462.00	97.06			95.75	32.98	3.18	34.85	103		Peak
11		2484.00	52.27	-21.73	74.00	50.91	33.01	3.20	34.85	103	261	Peak
12		2484.00	36.98	-17.02	54.00	35.62	33.01	3.20	34.85	103	261	Average

TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958 FCC ID: TX2-RTL8191SE

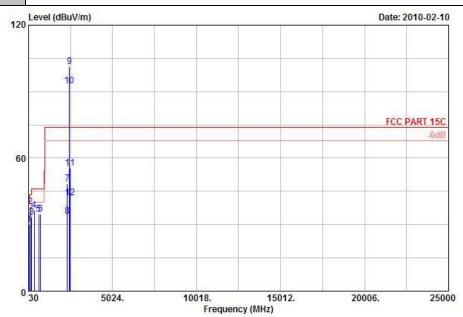
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Test Mode: **23~24**℃ Mode 11 Temperature : Test Channel: 11 45~46% Relative Humidity: Test Engineer: Harvey Tang Polarization: Vertical

Remark: #9 and #10 are Fundamental Signals which can be ignored.



Site : 03CH01-KS Condition: FCC PART 15C 3m LF_ANT_090807 VERTICAL Project : FR 012903-01

: 120Vac/60Hz Power

: Laptop

	Freq		Over Limit	Limit Line		Antenna Factor		Preamp Factor	Ant Pos	Table Pos	Remark
96	MHz	$\overline{\mathtt{dBuV/m}}$	- dB	$\overline{\mathtt{dBuV/m}}$	dBuV	dB/m	dB		C.M.	deg	-
1	54.03	30.01	-9.99	40.00	51.81	6.49	0.33	28.62			Peak
2 !	147.45	37.99	-5.51	43.50	55.84	10.21	0.58	28.64		19414	Peak
3	221.16	33.44	-12.56	46.00	51.31	10.17	0.69	28.73			Peak
4	376.30	36.30	-9.70	46.00	49.04	15.30	0.86	28.90		: <u>UBD</u>	Peak
4 5	645.10	34.74	-11.26	46.00	43.11	18.88	1.09	28.34		-	Peak
6	752.90	34.81	-11.19	46.00	41.55	19.90	1.19	27.83	0		Peak
6 7	2328.00	48.55	-25.45	74.00	47.52	32.76	3.10	34.83	100	356	Peak
8	2328.00	33.80	-20.20	54.00	32.77	32.76	3.10	34.83	100	356	Average
9 X	2462.00	101.18			99.87	32.98	3.18	34.85	100		Peak
10 X	2462.00	92.50			91.19	32.98	3.18	34.85	100	300	Average
11	2484.00	55.38	-18.62	74.00	54.02	33.01	3.20	34.85	100		Peak
12	2484.00	42.12	-11.88	54.00	40.76	33.01	3.20	34.85	100	300	Average

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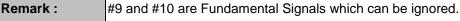


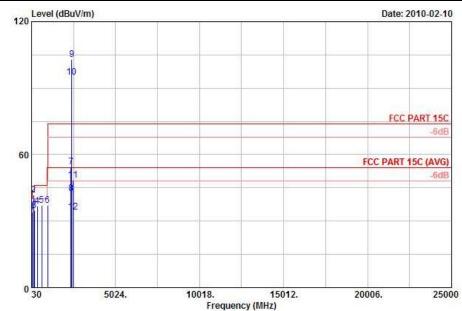
 Test Mode :
 Mode 12
 Temperature :
 23~24°C

 Test Channel :
 01
 Relative Humidity :
 45~46%

 Test Engineer :
 Harvey Tang
 Polarization :
 Horizontal

 Percentage
 WO and #40 are Fundamental Simple which are herizontal





Site : 03CH01-KS

Condition: FCC PART 15C 3m LF_ANT_090807 HORIZONTAL

Project : FR 012903-01 Power : 120Vac/60Hz

: Tablet E1 plane

	Freq	Level	Over Limit	Limit Line		Antenna Factor		Preamp Factor	Ant Pos	Table Pos	Remark
e t	MHz	$\overline{\mathtt{dBuV/m}}$	dB	$\overline{\mathtt{dBuV/m}}$	dBuV	dB/m	dB	dB -	CM.	deg	
1!	73.74	34.04	-5.96	40.00	56.62	5.68	0.37	28.63			Peak
2 !	147.45	41.65	-1.85	43.50	59.50	10.21	0.58	28.64	200	278	QP
3	192.00	34.66	-8.84	43.50	54.12	8.59	0.65	28.70			Peak
4	377.70	36.87	-9.13	46.00	49.57	15.34	0.86	28.90	- <u> </u>		Peak
3 4 5	645.10	37.00	-9.00	46.00	45.37	18.88	1.09	28.34	<u> </u>	12000	Peak
6	985.30	37.15	-16.85	54.00	41.29	21.01	1.34	26.49	-		Peak
7	2384.00	54.51	-19.49	74.00	53.39	32.83	3.13	34.84	176	263	Peak
8	2384.00	42.51	-11 49	54 00	41.39	32.83	3.13	34.84	176	263	Average
9 X	2412.00	102.97			101.77	32.89	3.15	34.84	176		Peak
10 X	2412.00	94 77			93.57	32.89	3 15	34.84	176		Average
11	2492.00	48.57	-25.43	74.00	47.16	33.05	3.21	34.85	100		Peak
12	2492.00		-19.89	54.00	32.70	33.05	3.21	34.85	100		Average

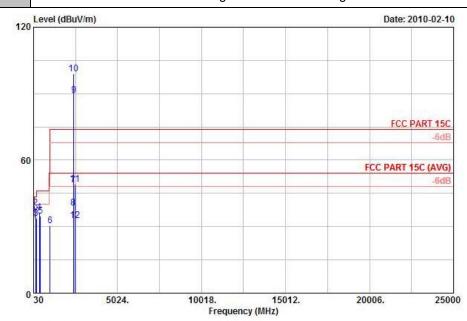
TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958 FCC ID: TX2-RTL8191SE Page Number : 38 of 51
Report Issued Date : Mar. 02, 2010

Report No.: FR021101



Test Mode: **23~24**℃ Mode 12 Temperature : Test Channel: 01 45~46% Relative Humidity: Test Engineer: Harvey Tang Polarization: Vertical

Remark: #9 and #10 are Fundamental Signals which can be ignored.



Site : 03CH01-KS Condition: FCC PART 15C 3m LF_ANT_090807 VERTICAL Project : FR 012903-01

: 120Vac/60Hz Power

: Tablet E1 plane

	Freq	Level	Over Limit	Limit Line		Antenna Factor		Preamp Factor	Ant Pos	Table Pos	Remark
7	MHz	$\overline{\mathtt{dBuV/m}}$	dB	$\overline{\mathtt{dBuV/m}}$	dBuV	dB/m	dB	dB -	CM.	deg	
1 !	48.09	35.06	-4.94	40.00	55.26	8.12	0.31	28.63		-	Peak
2 !	147.45	38.58	-4.92	43.50	56.43	10.21	0.58	28.64		12000	Peak
3	192.00	33.78	-9.72	43.50	53.24	8.59	0.65	28.70			Peak
4	377.00	36.53	-9.47	46.00	49.23	15.34	0.86	28.90	4.00		Peak
4 5	430.20	34.79	-11.21	46.00	46.62	16.20	0.90	28.93	<u> </u>	12000	Peak
6	999.30	30.53	-23.47	54.00	34.50	21.10	1.35	26.42			Peak
7	2390.00	48.73	-25.27	74.00	47.56	32.86	3.15	34.84	100	196	Peak
8	2390.00	38.45	-15.55	54.00	37.28	32.86	3.15	34.84	100	196	Average
9 X	2412.00	89.26			88.06	32.89	3.15	34.84	100		Average
10 X	2412.00	98.95			97.75	32.89	3.15	34.84	100	196	Peak
11	2494.00	49.00	-25.00	74.00	47.59	33.05	3.21	34.85	100	23	Peak
12	2494.00	32.88	-21.12	54.00	31.47	33.05	3.21	34.85	100		Average

TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958 FCC ID: TX2-RTL8191SE

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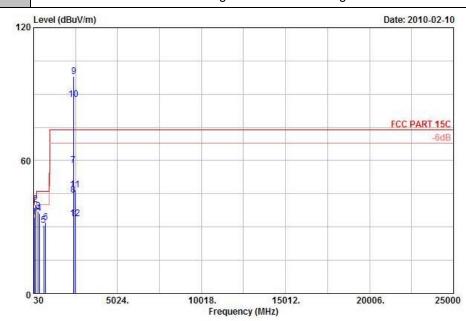


 Test Mode :
 Mode 13
 Temperature :
 23~24℃

 Test Channel :
 03
 Relative Humidity :
 45~46%

 Test Engineer :
 Harvey Tang
 Polarization :
 Horizontal

Remark: #9 and #10 are Fundamental Signals which can be ignored.



Site : 03CH01-KS

Condition: FCC PART 15C 3m LF_ANT_090807 HORIZONTAL Project : FR 012903-01

Project : FR 012903-01
Power : 120Vac/60Hz
Mode : Mode 13
: Laptop

	Freq		Over Limit	Limit Line		Antenna Factor		Preamp Factor	Ant Pos	Table Pos	Remark
S. T.	MHz	$\overline{\mathtt{dBuV/m}}$	dB	$\overline{\mathtt{dBuV/m}}$	dBuV	dB/m	dB	dB -	CM.	deg	
1 !	72.39	34.40	-5.60	40.00	57.09	5.55	0.37	28.61			Peak
2 !	147.45	40.02	-3.48	43.50	57.87	10.21	0.58	28.64		7. 3.1.31	Peak
3	295.14	37.01	-8.99	46.00	52.19	12.93	0.78	28.89			Peak
4	377.00	36.21	-9.79	46.00	48.91	15.34	0.86	28.90			Peak
4 5 6	645.10	30.89	-15.11	46.00	39.26	18.88	1.09	28.34	1000	10000	Peak
6	753.60	32.26	-13.74	46.00	38.99	19.90	1.19	27.82			Peak
7	2390.00	57.79	-16.21	74.00	56.62	32.86	3.15	34.84	100	264	Peak
8	2390.00	44.36	-9.64	54.00	43.19	32.86	3.15	34.84	100	264	Average
9 X	2422.00	97.88			96.63	32.92	3.17	34.84	100		Peak
10 X	2422.00	87.53			86.28	32.92	3.17	34.84	100	264	Average
11	2500.00	46.67	-27.33	74.00	45.26	33.05	3.21	34.85	100		Peak
12	2500.00	33.86	-20.14	54.00	32.45	33.05	3.21	34.85	100	165	Average

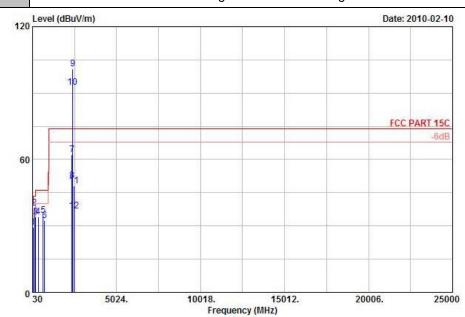
TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958 FCC ID: TX2-RTL8191SE Page Number : 40 of 51
Report Issued Date : Mar. 02, 2010

Report No.: FR021101



Test Mode: **23~24**℃ Mode 13 Temperature : 03 Test Channel: Relative Humidity: 45~46% Test Engineer: Harvey Tang Polarization: Vertical

Remark: #9 and #10 are Fundamental Signals which can be ignored.



: 03CH01-KS Site

Condition: FCC PART 15C 3m LF_ANT_090807 VERTICAL Project : FR 012903-01

: 120Vac/60Hz Power : Mode 13 Mode

	: Laptor		Over Limit	Limit Line		Antenna Factor		Preamp Factor	Ant Pos	Table Pos	Remark
- -	MHz	$\overline{\mathtt{dBuV/m}}$	dB	$\overline{\mathtt{dBuV/m}}$	dBuV	dB/m	dB	dB -	CM.	deg	
1	54.03	29.48	-10.52	40.00	51.28	6.49	0.33	28.62			Peak
2 !	147.45	38.10	-5.40	43.50	55.95	10.21	0.58	28.64			Peak
3	221.16	34.09	-11.91	46.00	51.96	10.17	0.69	28.73			Peak
2 ! 3 4 5	377.70	34.15	-11.85	46.00	46.85	15.34	0.86	28.90	<u> </u>	2000	Peak
5	647.20	34.72	-11.28	46.00	43.08	18.89	1.09	28.34		100000	Peak
6	756.40	32.27	-13.73	46.00	38.99	19.90	1.20	27.82			Peak
7	2386.00	62.08	-11.92	74.00	60.93	32.86	3.13	34.84	103	301	Peak
8 !	2386.00	50.35	-3.65	54.00	49.20	32.86	3.13	34.84	103	301	Average
9 X	2422.00	101.03			99.78	32.92	3.17	34.84	103		Peak
10 X	2422.00	92.72			91.47	32.92	3.17	34.84	103	301	Average
11	2500.00	48.10	-25.90	74.00	46.69	33.05	3.21	34.85	100		Peak
12	2500.00	36.87	-17.13	54.00	35.46	33.05	3.21	34.85	100	31	Average

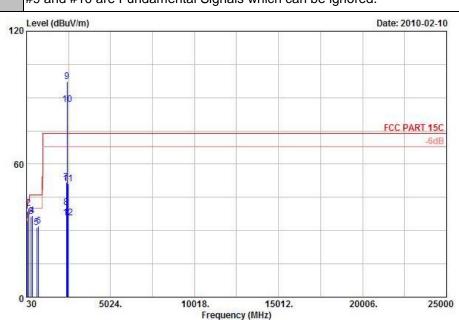
TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958 FCC ID: TX2-RTL8191SE

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Report No.: FR021101



Test Mode: **23~24**℃ Mode 14 Temperature : Test Channel: 06 45~46% Relative Humidity: Test Engineer: Harvey Tang Polarization: Horizontal Remark: #9 and #10 are Fundamental Signals which can be ignored.



Site : 03CH01-KS Condition: FCC PART 15C 3m LF_ANT_090807 HORIZONTAL Project : FR 012903-01

: 120Vac/60Hz : Mode 14 : Laptop Power Mode

	Freq		Over Limit	Limit Line		Antenna Factor		Preamp Factor	Ant Pos	Table Pos	Remark
: -	MHz	$\overline{\mathtt{dBuV/m}}$	dB	$\overline{\mathtt{dBuV/m}}$	dBuV	dB/m	dB	dB -	CM.	deg	
1!	72.39	34.49	-5.51	40.00	57.18	5.55	0.37	28.61			Peak
2 !	147.45	40.03	-3.47	43.50	57.88	10.21	0.58	28.64		7 2 2	Peak
3	295.14	36.59	-9.41	46.00	51.77	12.93	0.78	28.89			Peak
4 5	377.70	36.82	-9.18	46.00	49.52	15.34	0.86	28.90	<u> </u>		Peak
5	645.10	31.26	-14.74	46.00	39.63	18.88	1.09	28.34		-	Peak
6	752.90	32.23	-13.77	46.00	38.97	19.90	1.19	27.83			Peak
7	2390.00	51.69	-22.31	74.00	50.52	32.86	3.15	34.84	100	124	Peak
8	2390.00	40.52	-13.48	54.00	39.35	32.86	3.15	34.84	100	124	Average
9 X	2437.00	97.18			95.90	32.95	3.17	34.84	100		Peak
10 X	2437.00	86.86			85.58	32.95	3.17	34.84	100	268	Average
11	2488.00	51.29	-22.71	74.00	49.89	33.05	3.20	34.85	100		Peak
12	2488.00	35.80	-18.20	54.00	34.40	33.05	3.20	34.85	100	22	Average

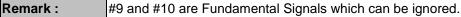
TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958 FCC ID: TX2-RTL8191SE

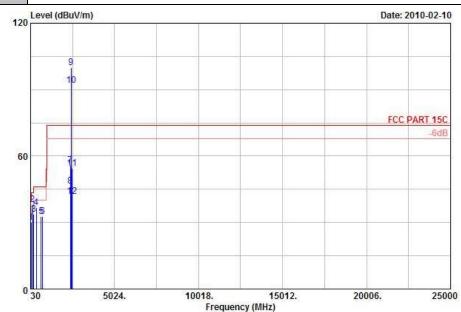
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Report No.: FR021101



Test Mode: **23~24**℃ Mode 14 Temperature : Test Channel: 06 45~46% Relative Humidity: Test Engineer: Harvey Tang Polarization: Vertical





: 03CH01-KS Site

Condition: FCC PART 15C 3m LF_ANT_090807 VERTICAL Project : FR 012903-01

Power : 120Vac/60Hz : Mode 14 Mode : Laptop

		Freq	Level	Over Limit	Limit Line		Antenna Factor		Preamp Factor	Ant Pos	Table Pos	Remark
		MHz	$\overline{\mathtt{dBuV/m}}$	dB	$\overline{\mathtt{dBuV/m}}$	dBuV	dB/m	dB		cm	deg	
1		54.03	30.01	-9.99	40.00	51.81	6.49	0.33	28.62			Peak
2		147.45	38.21	-5.29	43.50	56.06	10.21	0.58	28.64		9000	Peak
3		221.16	33.72	-12.28	46.00	51.59	10.17	0.69	28.73	-		Peak
4		377.00	36.72	-9.28	46.00	49.42	15.34	0.86	28.90			Peak
5		647.20	32.72	-13.28	46.00	41.08	18.89	1.09	28.34			Peak
6		752.90	32.89	-13.11	46.00	39.63	19.90	1.19	27.83		7	Peak
7		2390.00	55.90	-18.10	74.00	54.73	32.86	3.15	34.84	100	59	Peak
8		2390.00	46.43	-7.57	54.00	45.26	32.86	3.15	34.84	100	59	Average
9	X	2437.00	100.02			98.74	32.95	3.17	34.84	103	301	Peak
10	X	2437.00	91.77			90.49	32.95	3.17	34.84	103	301	Average
11		2484.00	54.59	-19.41	74.00	53.23	33.01	3.20	34.85	100		Peak
12		2484.00	41.64	-12.36	54.00	40.28	33.01	3.20	34.85	100	319	Average

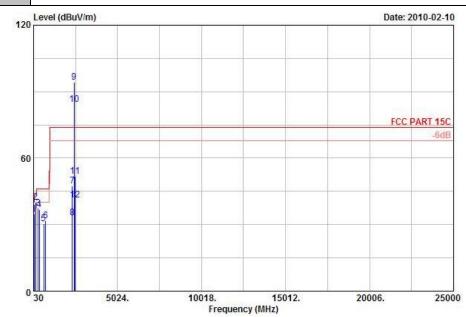
TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958 FCC ID: TX2-RTL8191SE

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Test Mode: **23~24**℃ Mode 15 Temperature : 09 Test Channel: 45~46% Relative Humidity: Test Engineer: Harvey Tang Polarization: Horizontal

Remark: #9 and #10 are Fundamental Signals which can be ignored.



Site : 03CH01-KS
Condition: FCC PART 15C 3m LF_ANT_090807 HORIZONTAL
Project : FR 012903-01
Power : 120Vac/60Hz
Mode : Mode 15
: Laptop

	Freq	Level	Over Limit	Limit Line		Antenna Factor		Preamp Factor	Ant Pos	Table Pos	Remark
-	MHz	$\overline{\mathtt{dBuV/m}}$	dB	$\overline{\mathtt{dBuV/m}}$	dBuV	dB/m	dB	dB	cm	deg	
1 !	72.39	34.83	-5.17	40.00	57.52	5.55	0.37	28.61			Peak
2 !	147.45	40.26	-3.24	43.50	58.11	10.21	0.58	28.64		7 2 2	Peak
3	295.14	37.31	-8.69	46.00	52.49	12.93	0.78	28.89			Peak
4 5	377.00	36.74	-9.26	46.00	49.44	15.34	0.86	28.90	<u> </u>		Peak
5	646.50	30.51	-15.49	46.00	38.87	18.89	1.09	28.34	<u> </u>	12000	Peak
6	752.90	31.84	-14.16	46.00	38.58	19.90	1.19	27.83			Peak
7	2328.00	47.49	-26.51	74.00	46.46	32.76	3.10	34.83	100	63	Peak
8	2328.00	33.18	-20.82	54.00	32.15	32.76	3.10	34.83	100	63	Average
9 X	2452.00	94.24			92.96	32.95	3.18	34.85	100		Peak
10 X	2452.00	84.28			83.00	32.95	3.18	34.85	100	263	Average
11	2486.00	51.85	-22.15	74.00	50.49	33.01	3.20	34.85	100		Peak
12	2486.00	41.26	-12.74	54.00	39.90	33.01	3.20	34.85	100		Average

TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958 FCC ID: TX2-RTL8191SE

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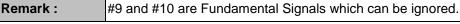


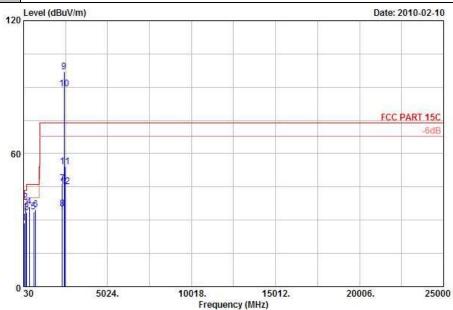
 Test Mode :
 Mode 15
 Temperature :
 23~24°C

 Test Channel :
 09
 Relative Humidity :
 45~46%

 Test Engineer :
 Harvey Tang
 Polarization :
 Vertical

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Site : 03CH01-KS

Condition: FCC PART 15C 3m LF_ANT_090807 VERTICAL

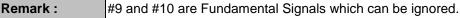
Project : FR 012903-01 Power : 120Vac/60Hz Mode : Mode 15 : Laptop

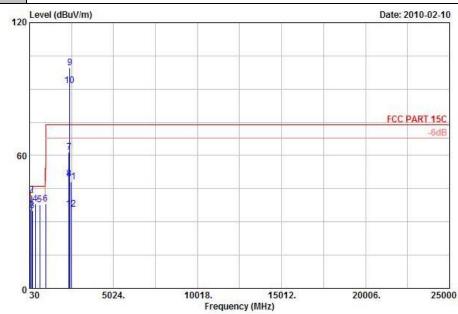
	Freq		Over Limit	Limit Line		Antenna Factor		Preamp Factor	Ant Pos	Table Pos	Remark
50	MHz	$\overline{\mathtt{dBuV/m}}$	dB	$\overline{\mathtt{dBuV/m}}$	dBuV	dB/m	<u>dB</u>	dB -	CM CM	deg	
1	72.39	28.89	-11.11	40.00	51.58	5.55	0.37	28.61		0.000	Peak
2 !	147.45	37.99	-5.51	43.50	55.84	10.21	0.58	28.64	100	0.011.011.5	Peak
3	221.16	33.38	-12.62	46.00	51.25	10.17	0.69	28.73			Peak
2 ! 3 4 5	376.30	36.03	-9.97	46.00	48.77	15.30	0.86	28.90			Peak
5	646.50	33.80	-12.20	46.00	42.16	18.89	1.09	28.34			Peak
6	753.60	34.86	-11.14	46.00	41.59	19.90	1.19	27.82			Peak
7	2328.00	46.54	-27.46	74.00	45.51	32.76	3.10	34.83	100	0	Peak
8	2328.00	35.21	-18.79	54.00	34.18	32.76	3.10	34.83	100	0	Average
9 X	2452.00	96.95			95.67	32.95	3.18	34.85	100		Peak
10 X	2452.00	89.30			88.02	32.95	3.18	34.85	100	301	Average
11	2486.00	54.31	-19.69	74.00	52.95	33.01	3.20	34.85	100		Peak
12	2486.00	45.02	-8.98	54.00	43.66	33.01	3.20	34.85	100		Average

TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958 FCC ID: TX2-RTL8191SE Page Number : 45 of 51
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Test Mode: **23~24**℃ Mode 16 Temperature : 03 Test Channel: 45~46% Relative Humidity: Test Engineer: Harvey Tang Polarization: Horizontal





Site : 03CH01-KS Condition: FCC PART 15C 3m LF_ANT_090807 HORIZONTAL Project : FR 012903-01

: 120Vac/60Hz Power

: Tablet E1 plane

		Freq	Level	Over Limit	Limit Line		Antenna Factor		Preamp Factor	Ant Pos	Table Pos	Remark
	-	MHz	$\overline{\mathtt{dBuV/m}}$	dB	$\overline{\mathtt{dBuV/m}}$	dBuV	dB/m	dB	dB _	CM.	deg	d.
1		73.74	35.83	-4.17	40.00	58.41	5.68	0.37	28.63			Peak
2	1	147.45	42.05	-1.45	43.50	59.90	10.21	0.58	28.64	200	267	QP
3		192.00	35.12	-8.38	43.50	54.58	8.59	0.65	28.70			Peak
4		376.30	38.14	-7.86	46.00	50.88	15.30	0.86	28.90	<u> </u>	2000	Peak
4 5		645.10	37.75	-8.25	46.00	46.12	18.88	1.09	28.34	-		Peak
6		997.90	38.00	-16.00	54.00	41.99	21.09	1.35	26.43	-		Peak
7		2386.00	61.61	-12.39	74.00	60.46	32.86	3.13	34.84	176	263	Peak
8	į.	2386.00	49.34	-4.66	54.00	48.19	32.86	3.13	34.84	176	263	Average
9 :	X	2422.00	99.74			98.49	32.92	3.17	34.84	176		Peak
10	X	2422.00	91.43			90.18	32.92	3.17	34.84	176	263	Average
11		2486.00	48.08	-25.92	74.00	46.72	33.01	3.20	34.85	100		Peak
12		2486.00	35.87	-18.13	54.00	34.51	33.01	3.20	34.85	100	355	Average

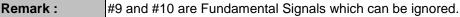
TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958 FCC ID: TX2-RTL8191SE

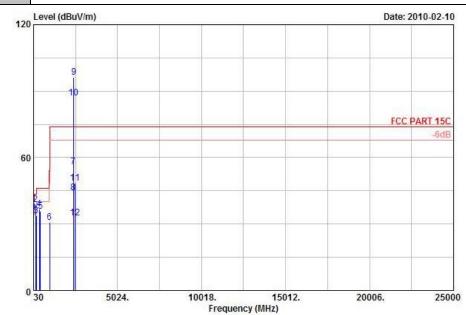
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Test Mode: **23~24**℃ Mode 16 Temperature : 03 Test Channel: 45~46% Relative Humidity: Test Engineer: Harvey Tang Polarization: Vertical





: 03CH01-KS Site

Condition: FCC PART 15C 3m LF_ANT_090807 VERTICAL Project : FR 012903-01

: 120Vac/60Hz Power

: Tablet E1 plane

		Freq	Level	Over Limit	Limit Line		Antenna Factor		Preamp Factor	Ant Pos	Table Pos	Remark
	Į.	MHz	$\overline{\mathtt{dBuV/m}}$	dB	dBuV/m	dBuV	dB/m	dB	dB -		deg	
1	1	48.09	35.16	-4.84	40.00	55.36	8.12	0.31	28.63			Peak
2		147.45	38.76	-4.74	43.50	56.61	10.21	0.58	28.64		7. 3.1.31	Peak
3		192.00	33.70	-9.80	43.50	53.16	8.59	0.65	28.70			Peak
4		376.30	36.75	-9.25	46.00	49.49	15.30	0.86	28.90	-	920000	Peak
1 2 3 4 5 6 7		430.20	35.67	-10.33	46.00	47.50	16.20	0.90	28.93			Peak
6		996.50	30.90	-23.10	54.00	34.90	21.08	1.35	26.43			Peak
7		2390.00	55.85	-18.15	74.00	54.68	32.86	3.15	34.84	100	195	Peak
8		2390.00	43.99	-10.01	54.00	42.82	32.86	3.15	34.84	100		Average
9 3	X	2422 00	96 14			94.89	32.92	3 17	34.84	100		Peak
10 2	X	2422.00	86.84			85.59	32.92	3.17	34.84	100	195	Average
11	7.0	2498.00	48.42	-25.58	74.00	47.01	33.05	3.21	34.85	100		Peak
12		2498.00	32.70		54.00	31.29	33.05	3.21	34.85	100		Average

TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958 FCC ID: TX2-RTL8191SE

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Report No.: FR021101



3.3 Antenna Requirements

3.3.1 Standard Applicable

If directional gain of transmitting antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. For the fixed point-to-point operation, the power shall be reduced by one dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional

radiator shall be considered sufficient to comply with the FCC rule.

3.3.2 Antenna Connected Construction

The antennas type used in this product is PIFA Antenna without connector and it is considered to meet antenna requirement.

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3.3.3 Antenna Gain

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum

peak output power limit.

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4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Due Date	Remark
EMI Receiver	R&S	ESCI	100534	9kHz~2.75GHz	Nov. 17, 2009	Nov. 16, 2010	Conduction (CO01-KS)
LISN	MessTec	AN3016	60103	9kHz~30MHz	Jan. 18, 2010	Jan. 17, 2011	Conduction (CO01-KS)
LISN	MessTec	AN3016	60105	9kHz~30MHz	Jan. 18, 2010	Jan. 17, 2011	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP0000008 11	N/A	Nov. 26, 2009	Nov. 25, 2010	Conduction (CO01-KS)
EMI Test Receiver	R&S	ESCI	100724	9kHz – 2.75GHz	Mar. 04, 2009	Mar. 03, 2010	Radiation (03CH01-KS)
Spectrum Analyzer	R&S	FSP40	100319	9kHz~40GHz	Jan. 18, 2010	Jan. 17, 2011	Radiation (03CH01-KS)
Bilog Antenna	SCHAFFNER	CBL6112D	23182	25MHz~2GHz	Jan. 18, 2010	Jan. 17, 2011	Radiation (03CH01-KS)
Double Ridge Horn Antenna	EMCO	3117	75959	1GHz~18GHz	Jan. 18, 2010	Jan. 17, 2011	Radiation (03CH01-KS)
Amplifier	Wireless	FPA6592G	60004	30MHz~2GHz	Feb. 02, 2010	Feb. 01, 2011	Radiation (03CH01-KS)
Amplifier	Agilent	8449B	3008A02370	1GHz~26.5GHz	Jan. 18, 2010	Jan. 17, 2011	Radiation (03CH01-KS)
actice hore antenna	com-power	AHA-118	701023	1G-18GHz	Nov. 18, 2009	Nov. 17, 2010	Radiation (03CH01-KS)
Signal Generator	R&S	SMR40	100455	10MHz~40GHz	Jan. 18, 2010	Jan. 17, 2011	Radiation (03CH01-KS)
SHF-EHF Horn	Schwarzbeck	BBHA 9170	BBHA170249	15-40GHz	Oct. 22, 2009	Oct. 21, 2010	Radiation (03CH01-KS)

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Uncertainty of Evaluation 5

Uncertainty of Conducted Emission Measurement (150 kHz ~ 30 MHz)

Contribution	Uncerta		
	dB	Probability Distribution	u(X _i)
Receiver Reading	0.10	Normal (k=2)	0.05
Cable Loss	0.10	Normal (k=2)	0.05
AMN Insertion Loss	2.50	Rectangular	0.63
Receiver Specification	1.50	Rectangular	0.43
Site Imperfection	1.39	Rectangular	0.80
Mismatch	+0.34 / -0.35	U-Shape	0.24
Combined Standard Uncertainty Uc(y)	1.13		
Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.26		

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Contribution	Uncerta		
	dB	Probability Distribution	u(X _i)
Receiver Reading	0.41	Normal (k=2)	0.21
Antenna Factor Calibration	0.83	Normal (k=2)	0.42
Cable Loss Calibration	0.25	Normal (k=2)	0.13
Pre-Amplifier Gain Calibration	0.27	Normal (k=2)	0.14
RCV/SPA Specification	2.50	Rectangular	0.72
Antenna Factor Interpolation for Frequency	1.00	Rectangular	0.29
Site Imperfection	1.43	Rectangular	0.83
Mismatch	+0.39 / -0.41	U-Shape	0.28
Combined Standard Uncertainty Uc(y)	1.27		
Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.54		

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Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

	Uncertainty of X _i				
Contribution	dB	Probability Distribution	u(X _i)	C _i	C _i * u(X _i)
Receiver Reading	±0.10	Normal (k=2)	0.10	1	0.10
Antenna Factor Calibration	±1.70	Normal (k=2)	0.85	1	0.85
Cable Loss Calibration	±0.50	Normal (k=2)	0.25	1	0.25
Receiver Correction	±2.00	Rectangular	1.15	1	1.15
Antenna Factor Directional	±1.50	Rectangular	0.87	1	0.87
Site Imperfection	±2.80	Triangular	1.14	1	1.14
Mismatch Receiver VSWR Γ 1 = 0.197 Antenna VSWR Γ 2 = 0.194 Uncertainty = 20Log(1- Γ 1* Γ 2)	+0.34 / -0.35	U-Shape	0.244	1	0.244
Combined Standard Uncertainty Uc(y)	2.36				
Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.72				

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Appendix A. Photographs of EUT

Please refer to Sporton report number EP021101 as below.

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