

# FCC/IC RF Test Report


APPLICANT : Kilpatrick LLC  
EQUIPMENT : Tablet PC  
MODEL NAME : C9R6QM  
FCC ID : S2F-8560  
IC : 10888A-8560  
STANDARD : FCC Part 15 Subpart C §15.247  
IC RSS-210 issue 8  
CLASSIFICATION : (DSS) Spread Spectrum Transmitter

The product was completely tested on Aug. 13, 2013. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures and shown to be compliant 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: Joseph Lin / Supervisor



Approved by: Jones Tsai / Manager



**SPORTON INTERNATIONAL INC.**

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

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Report NO. : FR332726-04A-RAD  
Report Version : Rev. 01  
Page Number : 1 of 21

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## REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR332726-04A	Rev. 01	Initial issue of report	Aug. 14, 2013

## SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	15.247(d)	RSS-210 A8.5	Radiated Band Edges and Radiated Spurious Emission	15.209(a) & 15.247(d)	Pass	Under limit 2.92 dB at 2483.500 MHz

# 1 General Description

## 1.1 Applicant

Kilpatrick LLC  
102 S. Tejon Street  
Suite 1100  
Colorado Springs, Colorado 80903

## 1.2 Feature of Equipment Under Test

Product Feature	
Equipment	Tablet PC
Model Name	C9R6QM
FCC ID	S2F-8560
IC	10888A-8560
EUT supports Radios application	WLAN 11a/b/g/n HT20/HT40 Bluetooth v3.0

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

## 1.3 Product Specification of Equipment Under Test

Product Specification subjective to this standard	
Tx/Rx Frequency Range	2402 MHz ~ 2480 MHz
Number of Channels	79
Carrier Frequency of Each Channel	2402+n*1 MHz; n=0~78
Antenna Type	Fixed internal Antenna with gain 4.10 dBi
Type of Modulation	Bluetooth v3.0 BR (1Mbps) : GFSK Bluetooth v3.0 EDR (2Mbps) : $\pi/4$ -DQPSK Bluetooth v3.0 EDR (3Mbps) : 8-DPSK

## 1.4 Modification of EUT

No modifications are made to the EUT during all test items.

## 1.5 Testing Site

<b>Test Site</b>	SPORTON INTERNATIONAL INC.			
<b>Test Site Location</b>	No. 52, Hwa Ya 1 <sup>st</sup> Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-3273456 / FAX: +886-3-3284978			
<b>Test Site No.</b>	<b>Sporton Site No.</b>			<b>FCC/IC Registration No.</b>
	TH02-HY	CO05-HY	03CH07-HY	722060/4086B-1

**Note:** The test site complies with ANSI C63.4 2003 requirement.

## 1.6 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 Public Notice DA 00-705
- ♦ ANSI C63.4-2003
- ♦ IC RSS-210 Issue 8
- ♦ IC RSS-Gen Issue 3
- ♦ NOTICE 2012-DRS0126

### 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, recorded in a separate test report.
3. Per the section 2.2.3 of Notice of 2012-DRS0126, "Receivers Excluded from Industry Canada Requirements", only radiocommunication receivers operating in stand-alone mode within the band 30-960 MHz and scanner receivers are subject to Industry Canada requirements.

## 2 Test Configuration of Equipment Under Test

### 2.1 Descriptions of Test Mode

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: radiation (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). Pre-scanned tests, X, Y, Z in three orthogonal panels, and the worst mode of radiated spurious emissions is Bluetooth 3Mbps mode, and recorded in this report.

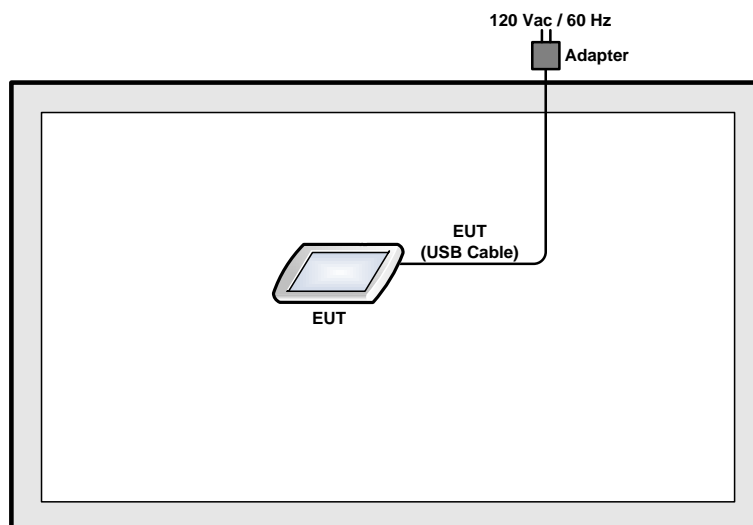
### 2.2 Test Mode

The following summary table is showing all test modes to demonstrate in compliance with the standard.

Summary table of Test Cases	
Radiated Test Cases	<b>Bluetooth EDR 3Mbps 8-DPSK</b>
	Mode 1: CH00_2402 MHz
	Mode 2: CH39_2441 MHz
	Mode 3: CH78_2480 MHz
<b>Remark:</b> For radiated test cases, the worst mode data rate 3Mbps was reported only, because this data rate has the highest RF output power at preliminary tests.	

### 2.3 Connection Diagram of Test System

<Bluetooth Tx Mode>



## 2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m
2.	Notebook	DELL	Latitude E6320	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
3.	LCD Monitor	DELL	U2410	FCC DoC	Shielded, 1.6 m	Unshielded, 1.8 m
4.	Bluetooth Earphone	Sony Ericsson	MW600	PY7DDA-2029	N/A	N/A
5.	iPod Earphone	Apple	N/A	FCC DoC	Unshielded, 1.0 m	N/A
6.	iPod	Apple	A1285	FCC DoC	Shielded, 1.0 m	N/A
7.	SD Card	SanDisk	MicroSD HC	FCC DoC	N/A	N/A
8.	Adapter	Foxlink	PE98ED	Verification	N/A	N/A

## 2.5 Description of RF Function Operation Test Setup

For Bluetooth function, the RF utility, “ADB” was installed in EUT which was programmed in order to make the EUT get into the engineering modes for continuous transmitting and receiving signals.

## 2.6 Measurement Results Explanation Example

### For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example:

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

*Offset = RF cable loss + attenuator factor.*

Following shows an offset computation example with cable loss 4.2 dB and 10dB attenuator.

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)}. \\ &= 4.2 + 10 = 14.2 \text{ (dB)} \end{aligned}$$



### 3 Test Result

#### 3.1 Radiated Band Edges and Spurious Emission Measurement

##### 3.1.1 Limit of Radiated Band Edges and Spurious 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. In addition, radiated emissions which fall in the restricted bands must also comply with the FCC section 15.209 limits as below.

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (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

##### 3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

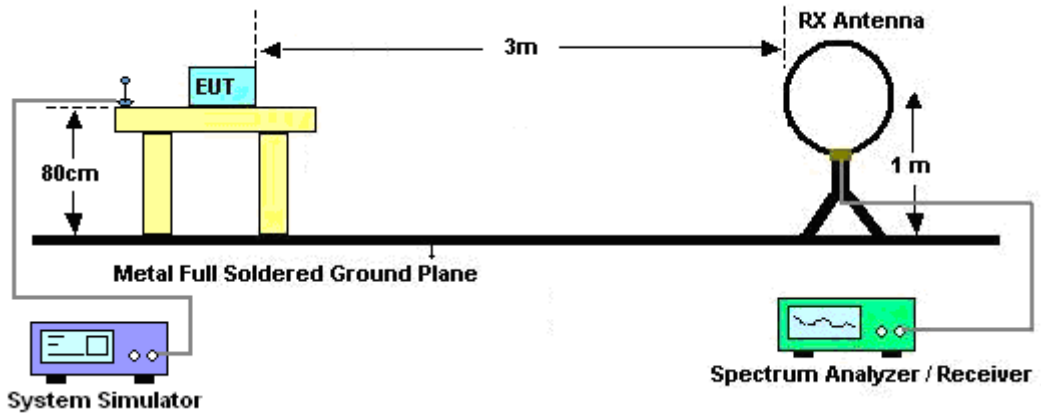
### 3.1.3 Test Procedures

1. The testing follows the guidelines in Spurious Radiated Emissions of FCC Public Notice DA 00-705 Measurement Guidelines.
1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. For each suspected emission, the EUT was arranged to its worst case and then tune the Antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level to comply with the guidelines.
4. Set to the maximum power setting and enable the EUT transmit continuously.
5. Use the following spectrum analyzer settings:
  - (1) Span shall wide enough to fully capture the emission being measured;
  - (2) Set RBW=100 kHz for  $f < 1$  GHz, RBW=1MHz for  $f > 1$ GHz ; VBW  $\geq$  RBW; Sweep = auto; Detector function = peak; Trace = max hold for peak
  - (3) For average measurement: use duty cycle correction factor method per 15.35(c).  
Duty cycle = On time/100 milliseconds  
On time =  $N_1 * L_1 + N_2 * L_2 + \dots + N_{n-1} * L_{n-1} + N_n * L_n$   
Where  $N_1$  is number of type 1 pulses,  $L_1$  is length of type 1 pulses, etc.  
Average Emission Level = Peak Emission Level +  $20 * \log(\text{Duty cycle})$
6. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level

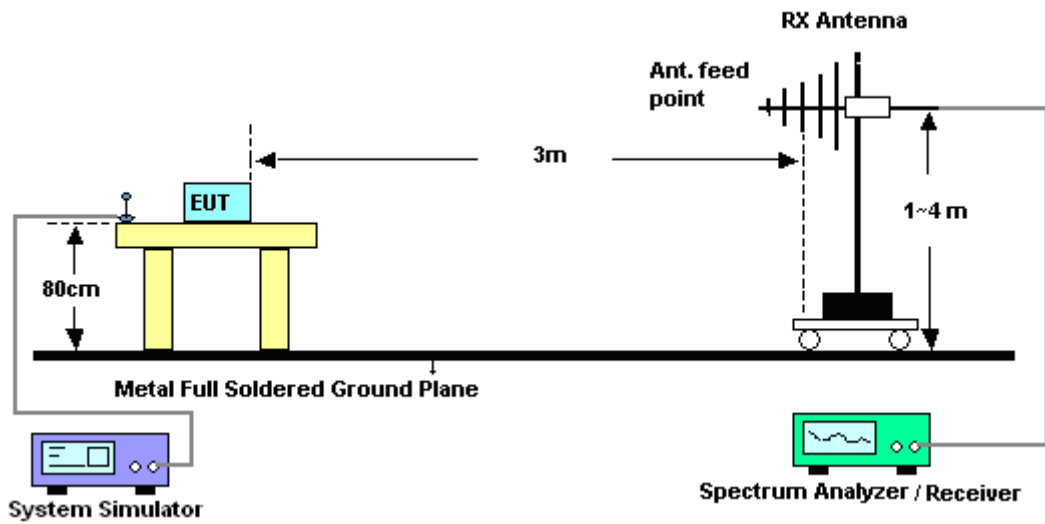
Note: The average levels were calculated from the peak level corrected with duty cycle correction factor (24.73dB) derived from  $20 \log(\text{dwell time}/100\text{ms})$ .

### 3.1.4 Test Setup

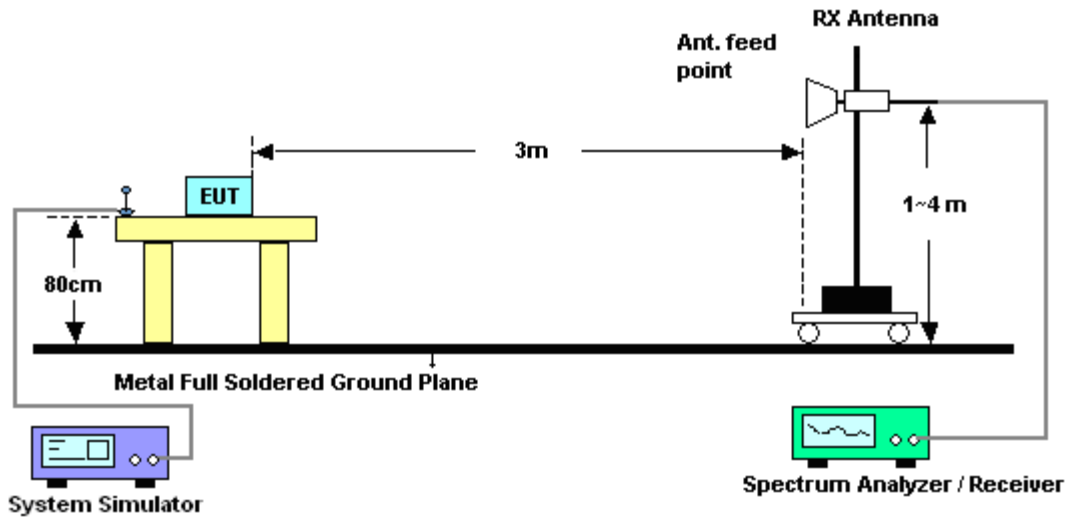
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz

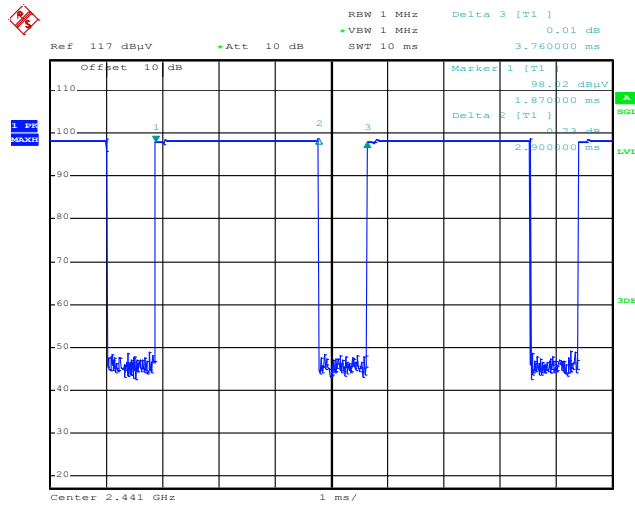


### 3.1.5 Test Results of Radiated Spurious Emissions (9 kHz ~ 30 MHz)

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

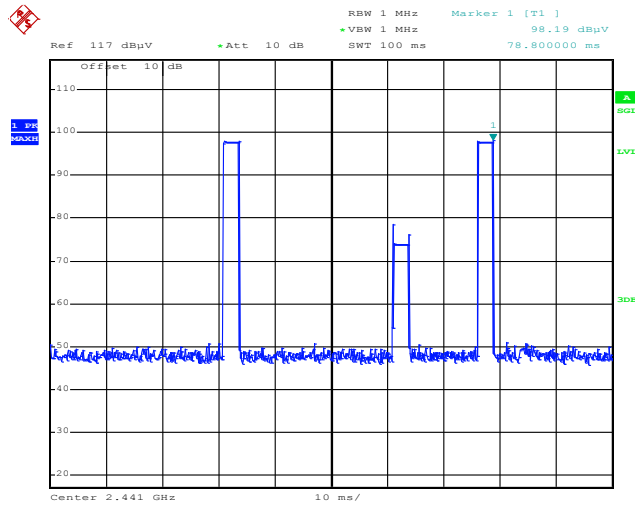
### 3.1.6 Duty cycle correction factor for average measurement

3DH5 on time (One Pulse) Plot on Channel 39



Date: 16.JUL.2013 22:29:43

3DH5 on time (Count Pulses) Plot on Channel 39



Date: 16.JUL.2013 22:24:09

**Note:**

1. Worst case Duty cycle = on time/100 milliseconds =  $2 * 2.90 / 100 = 5.80 \%$
2. Worst case Duty cycle correction factor =  $20 * \log(\text{Duty cycle}) = -24.73 \text{ dB}$
3. 3DH5 has the highest duty cycle worst case and is reported.

### **Duty Cycle Correction Factor Consideration for AFH mode:**

Bluetooth normal hopping rate is 1600Hz and reduced to 800Hz in AFH mode; due to the reduced number of hopping frequencies, with the same packet configuration the dwell time in each channel frequency within 100msec period is longer in AFH mode than normal mode.

In AFH mode, the minimum hopping frequencies are 20, to get the longest dwell time DH5 packet is observed; the period to have DH5 packet completing one hopping sequence is

$$2.90 \text{ ms} \times 20 \text{ channels} = 58.0 \text{ ms}$$

There cannot be 2 complete hopping sequences within 100ms period, considering the random hopping behavior, maximum 2 hops can be possibly observed within the period.  $[100\text{ms} / 57.6\text{ms}] = 2$  hops

Thus, the maximum possible ON time:

$$2.90 \text{ ms} \times 2 = 5.80 \text{ ms}$$

Worst case Duty Cycle Correction factor, which is derived from the maximum possible ON time,

$$20 \times \log(5.80 \text{ ms}/100\text{ms}) = -24.73 \text{ dB}$$

### 3.1.7 Test Result of Radiated Spurious at Band Edges

Test Mode :	3Mbps	Temperature :	21~23°C
Test Channel :	00	Relative Humidity :	51~53%
		Test Engineer :	David Ke

ANTENNA POLARITY : HORIZONTAL										
Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2353.92	59.36	-14.64	74	54.51	32.26	6.84	34.25	104	95	Peak
2353.92	34.63	-19.37	54	-	-	-	-	-	-	Average

ANTENNA POLARITY : VERTICAL										
Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2337.54	58.82	-15.18	74	53.96	32.24	6.84	34.22	106	154	Peak
2337.54	34.09	-19.91	54	-	-	-	-	-	-	Average

Test Mode :	3Mbps	Temperature :	21~23°C
Test Channel :	78	Relative Humidity :	51~53%
		Test Engineer :	David Ke

ANTENNA POLARITY : HORIZONTAL										
Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2483.5	71.08	-2.92	74	66.07	32.38	7.06	34.43	176	36	Peak
2483.5	46.35	-7.65	54	-	-	-	-	-	-	Average

ANTENNA POLARITY : VERTICAL										
Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2483.5	67.69	-6.31	74	62.68	32.38	7.06	34.43	125	100	Peak
2483.5	42.96	-11.04	54	-	-	-	-	-	-	Average

### 3.1.8 Test Result of Radiated Spurious Emission (30MHz ~ 10<sup>th</sup> Harmonic)

**Note:** Pre-scanned all test modes and only choose the worst case mode recorded in the test report for radiated spurious emission below 1GHz.

<b>Test Mode :</b>	3Mbps	<b>Temperature :</b>	21~23°C
<b>Test Channel :</b>	00	<b>Relative Humidity :</b>	51~53%
<b>Test Engineer :</b>	David Ke	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	1. 2402 MHz is fundamental signal which can be ignored. 2. 7206 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level. For example, 110.41 dB $\mu$ V/m - 20dB =90.41dB $\mu$ V/m.		

Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2402	110.41	-	-	105.5	32.3	6.91	34.3	104	95	Peak
2402	85.68	-	-	-	-	-	-	-	-	Average
4803	39.63	-34.37	74	55.87	33.98	8.75	58.97	100	0	Peak
4803	14.9	-39.1	54	-	-	-	-	-	-	Average
7206	43.22	-47.19	90.41	55.12	35.56	10.81	58.27	100	0	Peak

**Note:** Other harmonics are lower than background noise.

<b>Test Mode :</b>	3Mbps	<b>Temperature :</b>	21~23°C
<b>Test Channel :</b>	00	<b>Relative Humidity :</b>	51~53%
<b>Test Engineer :</b>	David Ke	<b>Polarization :</b>	Vertical
<b>Remark :</b>	1. 2402 MHz is fundamental signal which can be ignored. 2. 7206 MHz is not within a restricted band, and its limit line is 20dB below the highest emission level.		

Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2402	107.03	-	-	102.12	32.3	6.91	34.3	106	154	Peak
2402	82.3	-	-	-	-	-	-	-	-	Average
4803	39.3	-34.7	74	55.54	33.98	8.75	58.97	100	0	Peak
4803	14.57	-39.43	54	-	-	-	-	-	-	Average
7206	42.89	-44.14	87.03	54.79	35.56	10.81	58.27	100	0	Peak

**Note:** Other harmonics are lower than background noise.



<b>Test Mode :</b>	3Mbps	<b>Temperature :</b>	21~23°C
<b>Test Channel :</b>	39	<b>Relative Humidity :</b>	51~53%
<b>Test Engineer :</b>	David Ke	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	2442 MHz is fundamental signal which can be ignored.		

Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level (dB $\mu$ V)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2442	110.61	-	-	105.66	32.35	6.99	34.39	100	112	Peak
2442	85.88	-	-	-	-	-	-	-	-	Average
4881	39.86	-34.14	74	55.93	33.95	8.85	58.87	100	0	Peak
4881	15.13	-38.87	54	-	-	-	-	-	-	Average
7323	42.1	-31.9	74	54.15	35.53	10.91	58.49	100	0	Peak
7323	17.37	-36.63	54	-	-	-	-	-	-	Average

**Note:** Other harmonics are lower than background noise.

<b>Test Mode :</b>	3Mbps	<b>Temperature :</b>	21~23°C
<b>Test Channel :</b>	39	<b>Relative Humidity :</b>	51~53%
<b>Test Engineer :</b>	David Ke	<b>Polarization :</b>	Vertical
<b>Remark :</b>	2442 MHz is fundamental signal which can be ignored.		

Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level (dB $\mu$ V)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
2442	108.46	-	-	103.51	32.35	6.99	34.39	103	132	Peak
2442	83.73	-	-	-	-	-	-	-	-	Average
4881	39.67	-34.33	74	55.74	33.95	8.85	58.87	100	0	Peak
4881	14.94	-39.06	54	-	-	-	-	-	-	Average
7323	41.76	-32.24	74	53.81	35.53	10.91	58.49	100	0	Peak
7323	17.03	-36.97	54	-	-	-	-	-	-	Average

**Note:** Other harmonics are lower than background noise.

<b>Test Mode :</b>	3Mbps	<b>Temperature :</b>	21~23°C
<b>Test Channel :</b>	78	<b>Relative Humidity :</b>	51~53%
<b>Test Engineer :</b>	David Ke	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	2480 MHz is fundamental signal which can be ignored.		

Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level (dB $\mu$ V)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
30.81	27.47	-12.53	40	39.11	19.28	0.54	31.46	-	-	Peak
174.45	32.89	-10.61	43.5	53.57	9.1	1.24	31.02	-	-	Peak
216.3	41.22	-4.78	46	60.62	10.24	1.4	31.04	142	253	Peak
310.5	30.82	-15.18	46	46.44	13.59	1.79	31	-	-	Peak
608.7	22.29	-23.71	46	30.28	19.87	2.72	30.58	-	-	Peak
806.1	27.74	-18.26	46	32.73	22.16	3.16	30.31	-	-	Peak
2480	109.41	-	-	104.4	32.38	7.06	34.43	176	36	Peak
2480	84.68	-	-	-	-	-	-	-	-	Average
4960	40.2	-33.8	74	56.12	33.91	8.92	58.75	100	0	Peak
4960	15.47	-38.53	54	-	-	-	-	-	-	Average
7440	41.48	-32.52	74	53.64	35.51	11.04	58.71	100	0	Peak
7440	16.75	-37.25	54	-	-	-	-	-	-	Average

**Note:** Other harmonics are lower than background noise.

<b>Test Mode :</b>	3Mbps	<b>Temperature :</b>	21~23°C
<b>Test Channel :</b>	78	<b>Relative Humidity :</b>	51~53%
<b>Test Engineer :</b>	David Ke	<b>Polarization :</b>	Vertical
<b>Remark :</b>	2480 MHz is fundamental signal which can be ignored.		

Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
49.17	24.88	-15.12	40	46.89	8.5	0.69	31.2	-	-	Peak
127.47	30.12	-13.38	43.5	48.43	11.66	1.13	31.1	-	-	Peak
214.41	35.17	-8.33	43.5	54.74	10.11	1.38	31.06	111	320	Peak
310.5	32.37	-13.63	46	47.99	13.59	1.79	31	-	-	Peak
581.4	20.86	-25.14	46	29.42	19.47	2.64	30.67	-	-	Peak
871.9	25.71	-20.29	46	29.94	22.82	3.3	30.35	-	-	Peak
2480	107.67	-	-	102.66	32.38	7.06	34.43	125	100	Peak
2480	82.94	-	-	-	-	-	-	-	-	Average
4960	39.87	-34.13	74	55.79	33.91	8.92	58.75	100	0	Peak
4960	15.14	-38.86	54	-	-	-	-	-	-	Average
7440	41.77	-32.23	74	53.93	35.51	11.04	58.71	100	0	Peak
7440	17.04	-36.96	54	-	-	-	-	-	-	Average

**Note:** Other harmonics are lower than background noise.

## 4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Test Receiver	Rohde & Schwarz	ESCI 7	100724	9KHz~7GHz	Sep. 03, 2012	Jul. 16, 2013~ Jul. 17, 2013	Sep. 02, 2013	Radiation (03CH07-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP30	101067	9KHz~30GHz	Nov. 30, 2012	Jul. 16, 2013~ Jul. 17, 2013	Nov. 29, 2013	Radiation (03CH07-HY)
Bilog Antenna	Schaffner	CBL6111C	2726	30MHz~1GHz	Oct. 06, 2012	Jul. 16, 2013~ Jul. 17, 2013	Oct. 05, 2013	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	75962	1GHz~18GHz	Aug. 22, 2012	Jul. 16, 2013~ Jul. 17, 2013	Aug. 21, 2013	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170 251	18GHz~40GHz	Sep. 28, 2012	Jul. 16, 2013~ Jul. 17, 2013	Sep. 27, 2013	Radiation (03CH07-HY)
Preamplifier	COM-POWER	PA-103A	161241	30M~Hz1GHz	Feb. 26, 2013	Jul. 16, 2013~ Jul. 17, 2013	Feb. 25, 2014	Radiation (03CH07-HY)
Preamplifier	Agilent	8449B	3008A023 62	1GHz~26.5GHz	Dec. 01, 2012	Jul. 16, 2013~ Jul. 17, 2013	Nov. 30, 2013	Radiation (03CH07-HY)
Turn Table	ChainTek	ChainTek 3000	N/A	0 ~ 360 degree	N/A	Jul. 16, 2013~ Jul. 17, 2013	N/A	Radiation (03CH07-HY)
Antenna Mast	ChainTek	ChainTek 3000	N/A	N/A	N/A	Jul. 16, 2013~ Jul. 17, 2013	N/A	Radiation (03CH07-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	860004/00 01	9 kHz~30 MhZ	Jul. 03, 2012	Jul. 16, 2013~ Jul. 17, 2013	Jul. 03, 2014	Radiation (03CH07-HY)

## 5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2U_c(y)$ )	2.54
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### Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2U_c(y)$ )	4.72
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