



## SGS-CSTC Standards Technical Services Ltd.

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**FEDERAL COMMUNICATIONS COMMISSION**  
Registration number: 556682

Report No.: SZEMO060701537RFF(I)  
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FCC ID : RCKFO1406

# TEST REPORT

**Application No.** : SZEMO060701537RF  
**Applicant** : Honwell Products Limited  
**FCC ID** : RCKFO1406  
**Fundamental Frequency** : 90.459MHz and 91.494MHz  
**Equipment under Test (EUT):**

**EUT Name** : Wireless transmitter receiver  
**Item No.** : FO14  
**Standards** : FCC PART 15, SUBPART C : 2004  
Section 15.239  
**Date of Receipt** : 10 July 2006  
**Date of Test** : 10 to 21 July 2006  
**Date of Issue** : 21 July 2006

<b>Test Result :</b>	<b>PASS *</b>
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\* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Robinson Lo  
Laboratory Manager

This report refers to the General Conditions for Inspection and Testing Services, printed overleaf.  
This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.  
This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.  
The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.  
All test results in this report can be traceable to National or International Standards.



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### 2 Test Summary

Test	Test Requirement	Stanadard Paragraph	Result
Radiated Emission (30MHz to 1000MHz)	FCC PART 15 :2006	Section 15.239	PASS
Occupied Bandwidth	FCC PART 15 :2006	Section 15.239	PASS

Tx: In this whole report Tx (or tx) means Transmitter.

Rx: In this whole report Rx (or rx) means Receiver.

RF: In this whole report RF means Radiated Frequency.



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## **4 General Information**

### **4.1 Client Information**

Applicant: Honwell Products Limited  
Address of Applicant: RM705 INTERNATIONAL TRADE CENTRE 11-19 SHA TSUI RD. TSUEN  
WAN HONG KONG

### **4.2 Details of E.U.T.**

Product Name: Wireless trans mitter receiver  
Item No: FO14  
Power Supply: 3.0V DC (2\*1.5V 'AAA' Size Batteries) for Tx  
Power Cord: N/A-

### **4.3 Description of Support Units**

The EUT was tested as an independent unit: a 90.459MHz and 91.494MHz radio transmitter.

### **4.4 Test Location**

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory, No.198 Kezhu Road,  
Science Town Economic& Technology Development District Guangzhou, China 510663

Tel: +86 20 8215 5555 Fax: +86 20 8207 5059

### **4.5 Other Information Requested by the Customer**

None.



#### **4.6 Test Facility**

The test facility is recognized, certified, or accredited by the following organizations:

- **NVLAP – Lab Code: 200611-0**  
SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory is recognized under the National Voluntary Laboratory Accreditation Program (NVLAP/NIST). NVLAP Code: 200611-0. Effective through December 31, 2004.
- **ACA**  
SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory can also perform testing for the Australian C-Tick mark as a result of our NVLAP accreditation.
- **VCCI**  
The 3m Semi-anechoic chamber and Shielded Room (7.5m x 4.0m x 3.0m) of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-2197 and C-2383 respectively.  
Date of Registration: September 29, 2005. Valid until September 28, 2008.
- **SGS UK(Certificate No.: 32), SGS-TUV SAARLAND and SGS-FIMKO**  
Have approved SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory as a supplier of EMC TESTING SERVICES and SAFETY TESTING SERVICES.
- **CNAL – LAB Code: L0141**  
SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been assessed and in compliance with CNAL/AC01:2002 accreditation criteria for testing laboratories (identical to ISO/IEC 17025:1999 General Requirements) for the Competence of Testing Laboratories.
- **FCC – Registration No.: 556682**  
SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 556682, Aug. 04, 2005
- **Industry Canada (IC)**  
The 3m Semi-anechoic chamber of SGS-CSTC Standards Technical Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 6002.





### **5.3 Test Procedure & Measurement Data**

#### **5.3.1 Radiated Emissions**

Test Requirement: FCC Part15 C Section 15.239  
Test Method: ANSI C63.4  
Test Date: 17 July 2006  
Measurement Distance: 3m (Semi-Anechoic Chamber)  
Frequency range 30MHz to 10GHz for transmitting mode.  
Test instrumentation resolution bandwidth

Detector: 120KHz(30MHz – 1000MHz), 1 MHz(1000MHz – 25GHz)

Requirements:

(b) The field strength of any emissions within the permitted 200KHz band shall not exceed 250 Microvolts/meter at 3 meters. The emission limit in this paragraph is based on measurement Instrumentation employing an average detector. The provisions in Section 15.35 for limiting Peak emissions apply.

(c) The field strength of any emissions radiated on any frequency outside of the specified 200 KHz band shall not exceed the general radiated emission limits in Section 15.209.

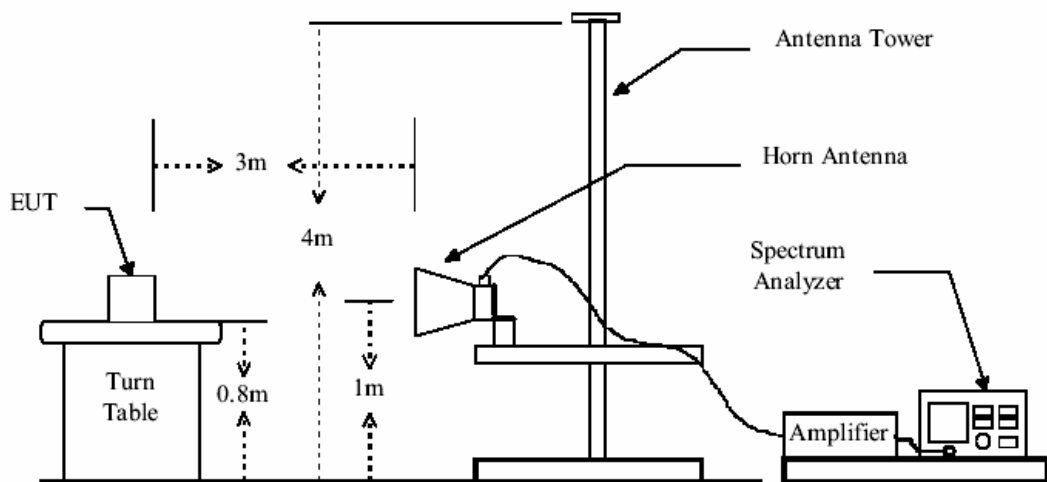
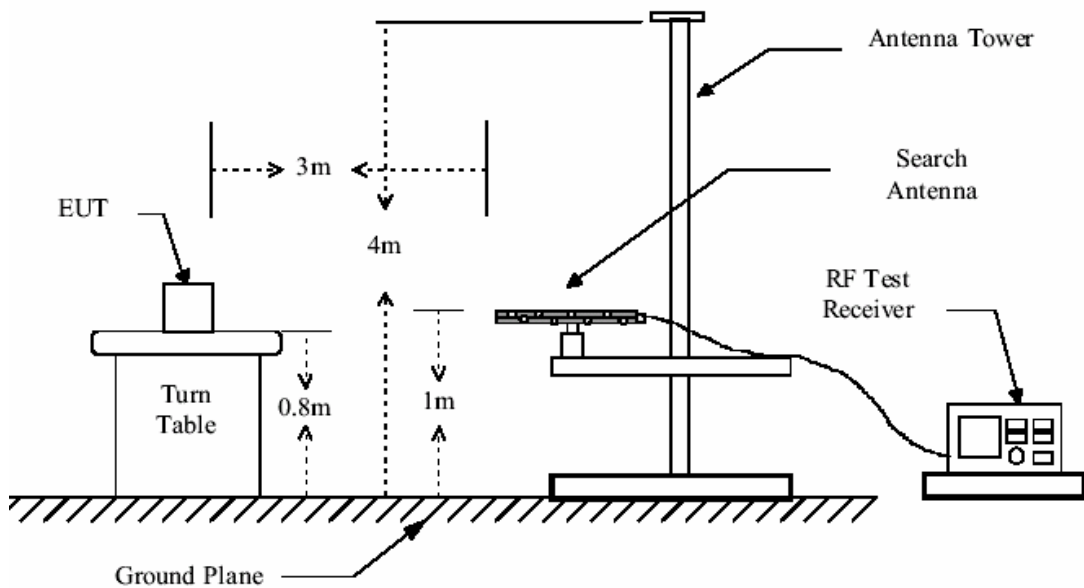
The EUT have 2 channels in the 88MHz to 94MHz with 200KHz channel spacing can in exchange for choice.

The limit for average field strength dBuV/m for fundamental frequency=48.0 dBuV/m  
And the limit for peak field strength dBuV/m for the fundamental frequency=68.0 dBuV/m

Test Procedure:

The receive was scanned from 30MHz to 25GHz. When an emission was found, the table was rotated to produce the maximum signal strength. An initial pre-scan was performed for in peak detection mode using the receiver. The EUT was measured for both the Horizontal and Vertical polarities and performed a pre-test three orthogonal planes. The worst case emissions were reported. For intentional radiators, measurements of the variation of the input power or the radiated signal level of the fundamental frequency component of the emission, as appropriate, shall be performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage. The worst case emissions were reported.

**Test Configuration:**







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### Intentional emission

#### Channel 1

Test Frequency (MHz)	Peak (dB $\mu$ V/m)		Limits (dB $\mu$ V/m)	Margin (dB)	
	Vertical	Horizontal		Vertical	Horizontal
90.459	44.1	39.2	68	23.9	28.8

Test Frequency (MHz)	Average (dB $\mu$ V/m)		Limits (dB $\mu$ V/m)	Margin (dB)	
	Vertical	Horizontal		Vertical	Horizontal
90.459	44.0	39.1	48	4.0	8.9

#### Channel 2

Test Frequency (MHz)	Peak (dB $\mu$ V/m)		Limits (dB $\mu$ V/m)	Margin (dB)	
	Vertical	Horizontal		Vertical	Horizontal
91.494	44.2	39.3	68	23.8	28.7

Test Frequency (MHz)	Peak (dB $\mu$ V/m)		Limits (dB $\mu$ V/m)	Margin (dB)	
	Vertical	Horizontal		Vertical	Horizontal
91.494	44.3	39.2	48	3.7	8.8



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### Other emissions

#### Channel 1

Test Frequency (MHz)	Quasi-Peak (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
	Vertical		Vertical
42.55	26.15	40.00	13.85
62.05	22.51	40.00	17.49
151.75	25.89	43.50	17.61
239.50	30.57	46.00	15.43
355.53	30.18	46.00	15.82

Test Frequency (MHz)	Quasi-Peak (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
	Horizontal		Horizontal
53.27	23.16	40.00	16.84
119.57	30.57	43.50	12.93
239.50	35.91	46.00	10.09
352.60	30.24	46.00	15.76
558.32	37.22	46.00	8.78

#### Channel 2

Test Frequency (MHz)	Quasi-Peak (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
	Vertical		Vertical
49.37	24.08	40.00	15.92
117.62	27.80	43.50	15.70
235.60	31.92	46.00	14.08
445.22	32.78	46.00	13.22
655.82	37.34	46.00	8.66

Test Frequency (MHz)	Quasi-Peak (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
	Horizontal		Horizontal
43.52	26.38	40.00	13.62
120.55	35.10	43.50	8.40
180.02	30.12	43.50	13.38
237.55	33.82	46.00	12.18
275.57	33.32	46.00	12.68

#### Remark:

For this intentional radiator operates below 10 GHz, the spectrum shall be investigated to the tenth Harmonic of the highest fundamental frequency. And the disturbance of harmonic of this intentional radiator is very low. So the test result only displays to the max six spurious emission value.



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**Test Results: The unit does meet the FCC Part 15  
C Section 15.239 requirements.**

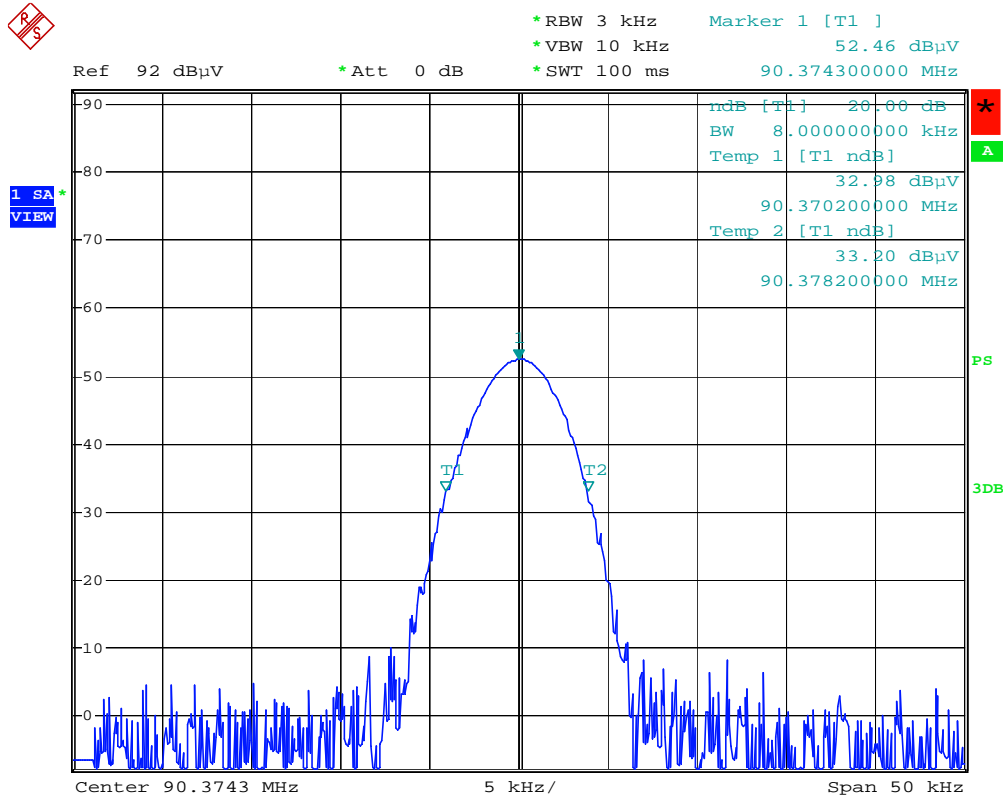


### 5.3.2 Occupied Bandwidth

Test Requirement: FCC Part15 C Section 15.239  
Test Method: ANSI C63.4  
Operation within the band 88 -94MHz  
Test Date: 21 July 2006  
Requirements: (a) Emissions from the intentional radiator shall be confined within a band 200KHz wide centered on the operating frequency. The 200KHz band shall lie wholly within the frequency range of 88-92MHz.  
Method of measurement: The useful radiated emission from the EUT was detected by the spectrum analyzer with peak detector. The vertical Scale is set to -10dB per division. The horizontal scale is set to 5KHz per division.

The graph as below, represents the emissions take for this device.

#### Channel 1



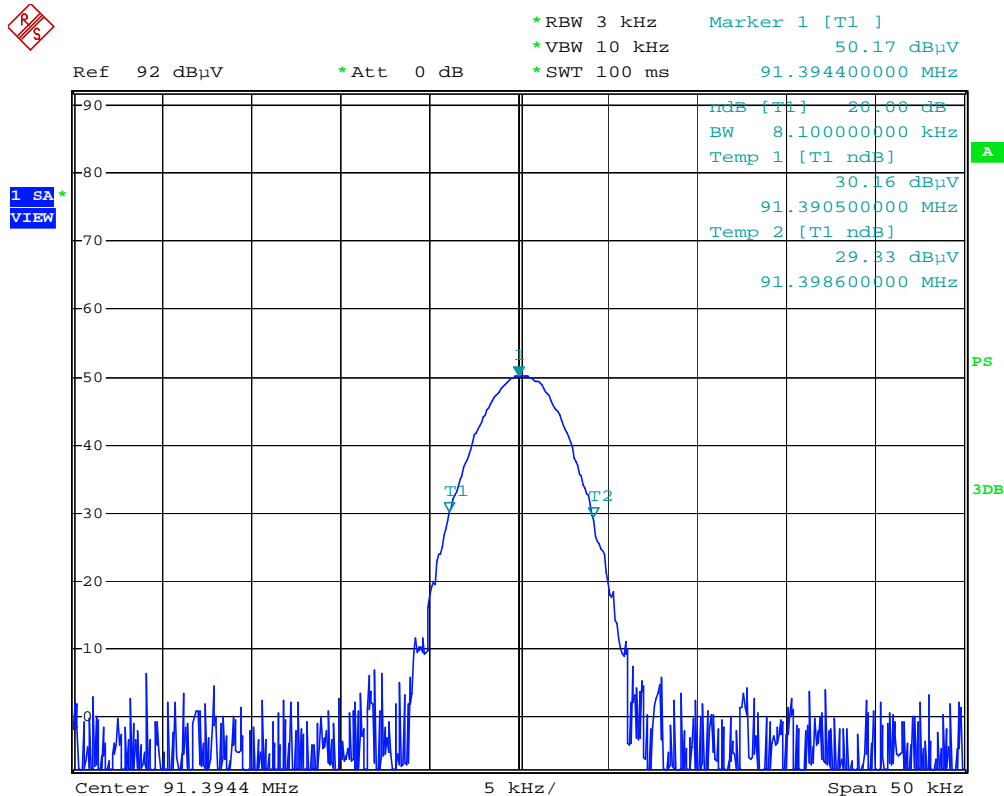
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## Channel 2



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The results: MP3 as input signal was tuned the volume to biggest. The unit does meet the FCC Part 15 C Section 15.239 requirements.