



MOST TECHNOLOGY SERVICE CO., LTD.

Tel: (86) 755-86170306 Fax: (86) 755-86170310

Http:// www. szmost.com Email: szmost@szmost.com

## **Test Report**

Product Name: 4 TRANSISTORS WALKIE TALKES

FCC ID: VCI-RK2509

MODEL NO. : RK-2509

Applicant:

**Real Key(Dong Guan)Technology Co., LTD.**

**JiaLongDa Buiding, ChangLang Road, Changping Tower, DongGuan City, GuangDong China**

**Date Received: 6/11/2007**

**Date Tested: 6/11/2007**



MOST TECHNOLOGY SERVICE CO., LTD.  
Tel:(86) 755-86170306 Fax:(86) 755-86170310  
Http:// www. szmost.com Email: szmost@szmost.com

## **TABLE OF CONTENTS**

**APPLICANT:** Real Key(Dong Guan) Technology Co., LTD.

**FCC ID:** VCI-RK2509

### **TEST REPORT CONTAINING:**

PAGE 1.....TEST EQUIPMENT LIST  
PAGE 2.....TEST PROCEDURE  
PAGE 3-4.....RADIATION INTERFERENCE TEST DATA  
PAGE 5-6.....OCCUPIED BANDWIDTH AND PLOTS

### **EXHIBIT INCLUDED:**

PAGE 1.....BLOCK DIAGRAM  
PAGE 2.....SCHEMATIC  
PAGE 3.....USERS MANUAL  
PAGE 4.....LABEL SAMPLE  
PAGE 5.....LABEL LOCATION  
PAGE 6.....EXTERNAL PHOTOGRAPHS  
PAGE 7.....INTERNAL PHOTOGRAPHS  
PAGE 8.....OPERATIONAL DESCRIPTION  
PAGE 9.....TEST SET UP PHOTOGRAPHS

APPLICANT: Real Key(Dong Guan) Technology Co., LTD  
FCC ID: VCI-RK2509

TABLE OF CONTENTS



MOST TECHNOLOGY SERVICE CO., LTD.

Tel:(86) 755-86170306 Fax:(86) 755-86170310

Http:// www. szmost.com Email: szmost@szmost.com

## EMC Equipment List

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
EMI Test Receiver	ROHDE&SCHWARZ	ESCI	100492	Apr 06,2007	1 Year
LISN	ROHDE&SCHWARZ	ENV216	100093	Apr 06,2007	1Year
EMI Test Receiver	ROHDE&SCHWARZ	ESCI	101202	Apr 06,2007	1 Year
50 Coaxial Switch	ANRITSU CORP	MP59B	6200283933	Apr 06,2007	1 Year
Bilog Antenna	Sunol	JB3	A121206	Apr 06,2007	1 Year
50 Coaxial Switch	ANRITSU CORP	MP59B	6200283933	Apr 06,2007	1 Year
Cable	Resenberger	N/A	NO.1	Apr 06,2007	1 Year
Cable	SCHWARZBECK	N/A	NO.2	Apr 06,2007	1 Year
Cable	SCHWARZBECK	N/A	NO.3	Apr 06,2007	1 Year
Single Phase Power Line Filter	Kikusui	LIN40MA-PC R-L	LM002352	Apr 06,2007	1Year
AC Power Source	Kikusui	AC40MA	LM003232	Apr 06,2007	1Year
Test analyzer	Kikusui	KHA1000	LM003720	Apr 06,2007	1Year
ESD Tester	Kikusui	KES4021	LM003537	Apr 08,2007	1 Year
Signal Generator	IFR	2032	203002/100	Apr 08,2007	1 Year
Amplifier	A&R	150W1000	301584	NCR	NCR
Dual Directional Coupler	A&R	DC6080	301508	Apr 06,2007	1 Year
Power Head	A&R	PH2000	301193	Apr 06,2007	1 Year
Power Meter	A&R	PM2002	302799	Apr 06,2007	1 Year
Field Monitor	A&R	FM5004	300329	Apr 06,2007	1 Year
Field Probe	A&R	FP5000	300221	Apr 06,2007	1 Year
EMC PRO System	EM Test	UCS-500-M4	V0648102026	Apr 06,2007	1 Year
EMC PRO System	EM Test	UCS-500-M4	V0648102026	Apr 06,2007	1 Year

Remark:

Test Firm Name: Most Technology Service Co., Ltd.

Test Firm Address:

No. 5, 2nd Langshan Road, North District, Hi-tech Industrial Park, Nanshan, Shenzhen, Guangdong, China

FCC Registered Test Site Number: 490827

APPLICANT: Real Key(Dong Guan) Technology Co., LTD

FCC ID: VCI-RK2509



MOST TECHNOLOGY SERVICE CO., LTD.  
Tel: (86) 755-86170306 Fax: (86) 755-86170310  
Http:// www. szmost.com Email: szmost@szmost.com

## TEST PROCEDURE

**GENERAL:** This report shall NOT be reproduced except in full without the written approval of MOST TECHNOLOGY SERVICE CO., LTD. The EUT was transmitting a test signal during the testing.

**POWER LINE CONDUCTED INTERFERENCE:** The test procedure used was ANSI Standard C63.4-2003 using a 50 UH LISN. Both Lines were observed. The bandwidth of the receiver was 10kHz with an appropriate sweep speed. The ambient temperature of the EUT was 25 with a humidity of 58%.

**RADIATION INTERFERENCE:** The test procedure used was ANSI Standard C63.4-2003 using a ANRITSU spectrum analyzer with a pre-selector. The analyzer was calibrated in dB above a micro volt at the output of the antenna. The resolution bandwidth was 100 kHz and the video bandwidth was 300 kHz up to 1 GHz and 1 MHz with a video BW of 3 MHz above 1 GHz. The ambient temperature of the EUT was 25 with a humidity of 58%.

**FORMULA OF CONVERSION FACTORS:** The Field Strength at 3m was established by adding the meter reading of the spectrum analyzer (which is set to read in units of dBuV) to the antenna correction factor supplied by the antenna manufacturer. The antenna correction factors are stated in terms of dB. The gain of the Pre-selector was accounted for in the Spectrum Analyzer Meter Reading.

Example:

Freq (MHz) METER READING + ACF = FS  
33                      20 dBuV + 10.36 dB = 30.36 dBuV/m @ 3m

**ANSI STANDARD C63.4-2003 10.1.7 MEASUREMENT PROCEDURES:** The EUT was placed on a table 80 cm high and with dimensions of 1m by 1.5m. The EUT was placed in the center of the table (1.5m side). The table used for radiated measurements is capable of continuous rotation.

When an emission was found, the table was rotated to produce the maximum signal strength. At this point, the antenna was raised and lowered from 1m to 4m. The antenna was placed in both the horizontal and vertical planes.

The situation was similar for the conducted measurement except that the table did not rotate. The EUT was setup as described in ANSI Standard C63.4-2003 10.1.7 with the EUT 40 cm from the vertical ground wall.



MOST TECHNOLOGY SERVICE CO., LTD.  
Tel:(86) 755-86170306 Fax:(86) 755-86170310  
Http:// www. szmost.com Email: szmost@szmost.com

**APPLICANT:** Real Key(Dong Guan) Technology Co., LTD.

**FCC ID:** VCI-RK2509

**NAME OF TEST:** RADIATION INTERFERENCE

**RULES PART NUMBER:** 15.235

**REQUIREMENTS:** CARRIER FREQUENCY WILL NOT EXCEEDS 80 dBuV/m AT 3M.  
OUT-OF-BAND EMISSIONS SHALL NOT EXCEED:

30 - 88 MHz	40.0 dBuV/M MEASURED AT 3 METERS
88 - 216 MHz	43.5 dBuV/M
216 - 960 MHz	46.0 dBuV/M
ABOVE 960 MHz	54.0 dBuV/M

Fundamental Radiation Interference Data:

Frequency (MHz)	Antenna Polarization	Emission Level (dBuV/m)	FCC 15 Subpart C Limit (dBuV/m)
49.86	Horizontal	45.07	80
49.86	Vertical	44.87	80



MOST TECHNOLOGY SERVICE CO., LTD.  
Tel: (86) 755-86170306 Fax: (86) 755-86170310  
Http:// www. szmost.com Email: szmost@szmost.com

**APPLICANT:** Real Key(Dong Guan) Technology Co., LTD

**FCC ID:** VCI-RK2509

**NAME OF TEST:** RADIATION INTERFERENCE

**RULES PART NUMBER:** 15.235

**REQUIREMENTS:** CARRIER FREQUENCY WILL NOT EXCEEDS 80 dBuV/m AT 3M.  
OUT-OF-BAND EMISSIONS SHALL NOT EXCEED:

30 - 88 MHz	40.0 dBuV/M MEASURED AT 3 METERS
88 - 216 MHz	43.5 dBuV/M
216 - 960 MHz	46.0 dBuV/M
ABOVE 960 MHz	54.0 dBuV/M

**Continued:**

Frequency (MHz)	Antenna Polarization	Emission Level (dBuV/m)	FCC 15 Subpart C Limit (dBuV/m)
99.84	Horizontal	23.02	43.50
831.220	Horizontal	32.78	46.00
837.040	Vertical	32.50	46.00

**SAMPLE CALCULATION:** FSdBuV/m = MR (dBuV) + ACFdB.

**TEST PROCEDURE:** The procedure used was ANSI STANDARD C63.4-2003. The spectrum was scanned from 30 MHz to 1000 MHz. When an emission was found, the table was rotated to produce the maximum signal strength. The antenna was placed in both the horizontal and vertical planes and the worse case emissions were reported.



MOST TECHNOLOGY SERVICE CO., LTD.  
Tel:(86) 755-86170306 Fax:(86) 755-86170310  
Http:// www. szmost.com Email: szmost@szmost.com

**APPLICANT:** Real Key(Dong Guan) Technology Co., LTD.

**FCC ID:** VCI-RK2509

**NAME OF TEST:** Occupied Bandwidth

**RULES PART NUMBER:** 15.235

**REQUIREMENTS:** The field strength of any emissions appearing between the band edges and up to 10 kHz above and below the band edges shall be attenuated at least 26 dB below the level of the un-modulated carrier or to the general limits of 15.209, whichever permits the higher emission levels.

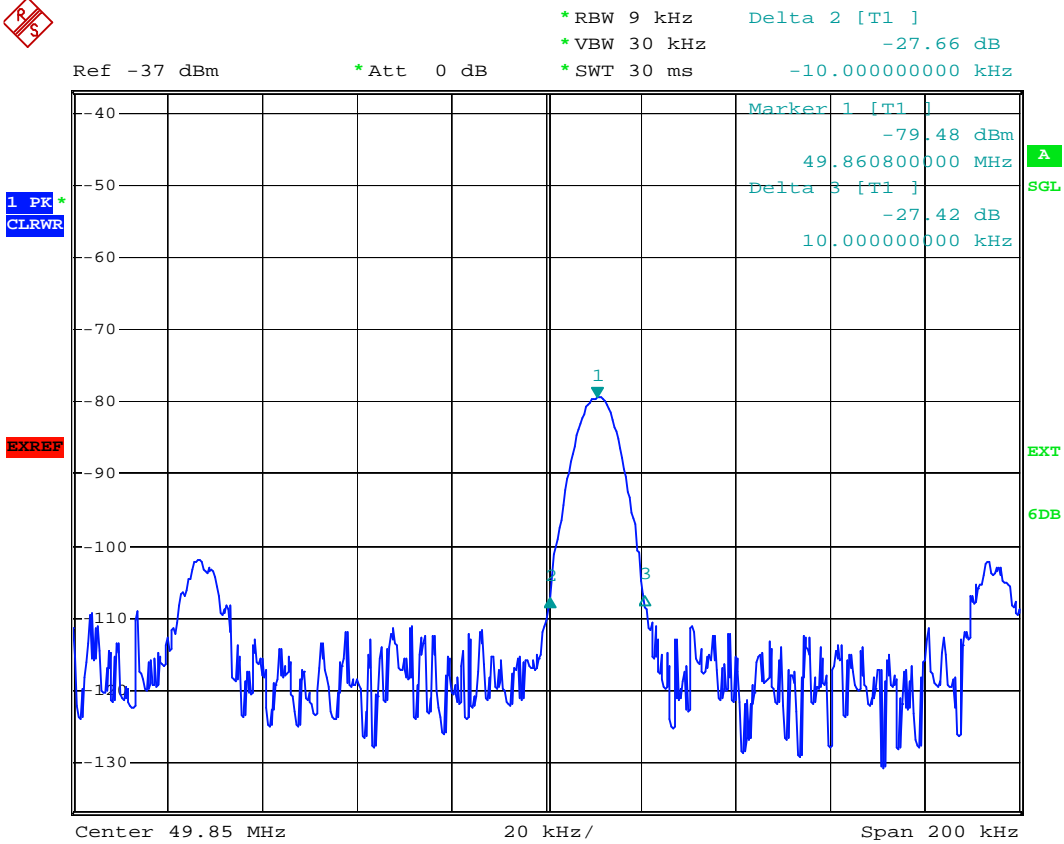
Band edge emissions plots are included on the following pages

**METHOD OF MEASUREMENT:** A small sample of the transmitter output was fed into the spectrum analyzer and the attached plot was printed. The vertical scale is set to -10 dB per division.

**TEST RESULTS:** The unit DOES meet the FCC requirements.



MOST TECHNOLOGY SERVICE CO., LTD.  
Tel: (86) 755-86170306 Fax: (86) 755-86170310  
Http:// www. szmost.com Email: szmost@szmost.com



Date: 11.JUN.2007 07:53:03