

Test Report: 2W04841

Applicant: Samsung Electro-Mechanics CO, Ltd.

314, Maetan-3 Dong, Paldal-Gu, Suwon,

Kyungki-Do

Korea

Equipment Under Test: SDR4000K

(EUT) 27MHz Low Power Wireless Keyboard

FCC ID:

In Accordance With: FCC 47 CFR Part 15, Subpart C: 2000

**Tested By:** Nemko Canada Inc.

303 River Road, R.R. 5 Ottawa, Ontario K1V 1H2

**Authorized By:** 

John Harrington, RF Group Manager

Str. Harringt

**Date:** 12 April 2002

Total Number of Pages: 11

EQUIPMENT: SDR4000K

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FCC PART 15, SUBPART C PROJECT NO.:2W04841

EQUIPMENT: SDR4000K

## Section 1. Summary Of Test Results

#### General

#### All measurements are traceable to national standards.

These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with FCC Part 15, Subpart C for low power devices. All tests were conducted using measurement procedure ANSI C63.4-1992. Radiated Emissions were made on an open area test site. A description of the test facility in on file with the FCC.

THIS TEST REPORT RELATES ONLY TO THE ITEM(S) TESTED.

THE FOLLOWING DEVIATIONS FROM, ADDITIONS TO, OR EXCLUSIONS FROM THE TEST SPECIFICATIONS HAVE BEEN MADE.

See "Summary of Test Data".

TESTED BY: Glen Westwell, Wireless Technologist DATE: 10 April 2002

Nemko Canada Inc., a testing laboratory, is accredited by the Standards Council of Canada. The tests included in this report are within the scope of this accreditation. The results apply only to the samples tested.

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This report applies only to the items tested.

## Nemko Canada Inc.

FCC PART 15, SUBPART C PROJECT NO.:2W04841

EQUIPMENT: SDR4000K

# **Summary Of Test Data**

Name Of Test	Para. No.	Result
Powerline Conducted Emissions	15.207	N/A
Radiated Emissions (Fundimental)	15.227	Complies
Radiated Emissions (Spurious)	15.209	Complies

## **Footnotes For N/A's:**

**Test Conditions:** 

**Indoor** Temperature: 22°C

Humidity: 44%

**Outdoor** Temperature: 9°C

Humidity: 46%

### Nemko Canada Inc.

FCC PART 15, SUBPART C PROJECT NO.:2W04841

EQUIPMENT:SDR4000K

Section 2. General Equipment Specification

Manufacturer: Samsung Electro-Mechanics CO, Ltd.

Model No.: SDR4000K

Serial No.: None

**Date Received In Laboratory:** 8 April 2002

Nemko Identification No.: #4

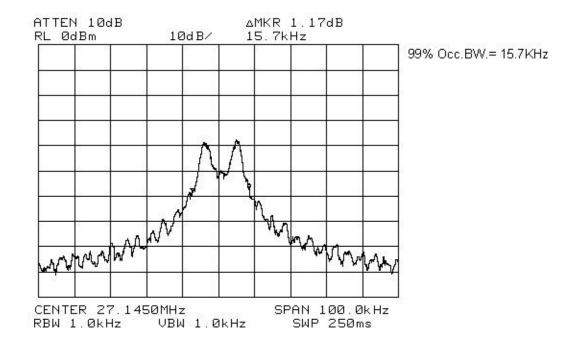
**Transmit Frequency:** 27.145MHz

**Modulation:** FSK

**Rated Output Power:** -12dBm (.063mW)

**Input Power Source:** 3Vdc

**Emission Designator:** 15K7F1D



EQUIPMENT:SDR4000K

Section 3. Radiated Emissions

Para. No.: 15.209 15.227

Test Performed By: Glen Westwell Date of Test: 9April 2002

Minimum Standard: 15.227, 80dBuV/M at 3m.

Minimum Standard: 15.209,

Fundamental (MHz)	Field Strength (µV/m)	Field Strength (dBµV)		
0.009 - 0.490	2400/F(kHz) @ 300m			
0.490 - 1.705	24000/F(kHz) @ 30m			
1.705 - 30	30 @ 30m			
30 - 88	100	40.0		
88 - 216	150	43.5		
216 - 960	200	46.0		
Above 960	500	54.0		

**Test Results:** Complies.

**Measurement Data:** See attached table.

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## **Test Data - Radiated Emissions**

Test Distance (meters): 3		Range:		Receiver: EVSP		RBW(kHz): 120		Detector: O-Peak	
Freq. (MHz)	Ant.	Pol. (V/H)	RCVD Signal (dBµV/m)	Ant. Factor (dB)**	Amp. Gain (dB)***	Dist. Corr. (dB)	Field Strength (dBµV/m)	Limit (dBµV/m)	Margin (dB)
27.145	BC1	V	48.8	14			62.8	80.0	17.2
27.145	BC1	Н	36.3	14			50.3	80.0	29.7
81.435	BC1	V	7.4	8.4			15.8	40.0	24.2
81.435	BC1	Н	N.D.				N.D.	40.0	
108.58	BC1	V	10.3	11.2			21.5	43.5	22.0
108.58	BC1	Н	N.D.				N.D.	43.5	
135.725	BC1	V	10.2	13.9			24.1	43.5	19.4
135.725	BC1	Н	N.D.				N.D.	43.5	
162.87	BC1	V	12.2	13.8			26.0	43.5	17.5
162.87	BC1	Н	N.D.				N.D.	43.5	

#### **Notes:**

B/C = Biconical, B/L = Biconilog, L/P = Log-Periodic, H = Horn, D/P = Dipole

\* Re-measured using dipole antenna.

\*\* Includes cable loss when amplifier is not used.

\*\*\* Includes cable loss.

() Denotes failing emission level.

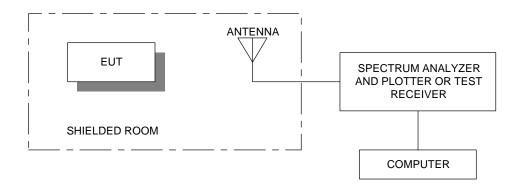
N.D. = Not Detected

All emissions were searched up to the 10<sup>th</sup> harmonic.

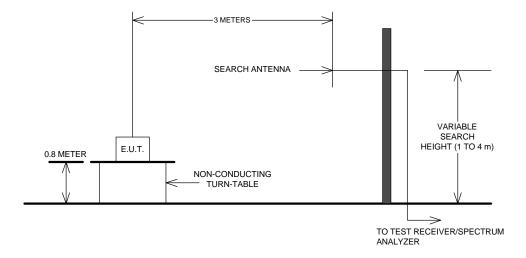


# Section 4. Block Diagrams

#### **Radiated Prescan**



### **Test Site For Radiated Emissions**



EQUIPMENT:SDR4000K

# Section 5. Test Equipment List

CAL	EQUIPMENT	MANUFACTURER	MODEL	SERIAL	LAST CAL.	NEXT CAL.
CYCLE						
1 Year	Spectrum Analyzer-1	Hewlett Packard	8566B	2311A02238	27 Nov 2001	27 Nov 2002
1 Year	Spectrum Analyzer	Hewlett Packard	8566B	2314A04759	27 Nov 2001	27 Nov 2002
	Display-1					
1 Year	Quasi-peak adapter-1	Hewlett-Packard	85650A	2043A00302	27 Nov 2001	27 Nov 2002
1 Year	Receiver	Rohde & Schwarz	ESVP	892661/014	19 Sep 2001	19 Sep 2002
1 Year	Biconical 2	EMCO	3109	2708	Aug. 28/01	Aug. 28/02

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