TEST REPORT

FROM

SIEMIC, INC.
Accessing global markets

FOR

Remote Control Solutions, LLC

Remote Control Transmitter

Model: RCS-310MDB1

TO

47 CFR 15.231 :2007

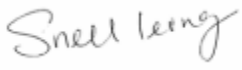
Test Report Serial No.:
SL07050901-RCS-001(FCC 15C)

This report supersedes None

Remarks:	Equipment complied with the specification	[X]
	Equipment did not comply with the specification	[ ]

This Test Report is Issued Under the Authority of:

.....
Tested by: Benjamin Jing, Test Engineer



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Reviewed by: Snell Leong, Reviewer

Issue date: 2 July 2007
Manufacturer: Remote Control Solutions, LLC

Registration No. 783147

Industry Canada
Industrie Canada
Registration No. 4842

MIC
Lab Code: KR0032

OFTA
電訊管理局
RTA No. D23/16V

VCCI
Registration No. 2195

Lab Code : U S 0 1 6 0

CSMI Code. SL2-IN-E-1160R

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Executive Summary

The purpose of this test programme was to demonstrate compliance of the Remote Control Solutions, LLC , Remote Control Transmitter , model RCS-310MDB1 against the current 47 CFR 15.231 :2007. The Remote Control Transmitter demonstrated compliance with the 47 CFR 15.231 :2007.
Remote Control Solutions, LLC is the applicant and claimed manufacturer of this tested product. For the detailed description of this product, please refer to the Remote Control Transmitter User Manual.

The equipment under test operating frequency is 310MHz.

The test has demonstrated that this unit complies with stipulated standards.

1 Technical Details

Purpose	Compliance testing of Remote Control Transmitter with 47 CFR 15.231 :2007
Applicant / Client	Remote Control Solutions, LLC 4862 E. Baseline Rd. Suite 104 Mesa, AZ 85206
Manufacturer	Remote Control Solutions, LLC
Laboratory performing the tests	SIEMIC Labs 2206 Ringwood Avenue San Jose, CA 95131
Test location(s)	SIEMIC Labs 2206 Ringwood Avenue San Jose, CA 95131
Test report reference number	SL07050901-RCS-001(FCC 15C)
Date EUT received	29 June 2007
Standard applied	47 CFR 15.231 :2007
Dates of test (from – to)	29 June 2007 to 2 July 2007
No of Units:	1
Equipment Category:	DSC
Trade/Product Name:	RCS-310MDB1
Type/Model Name/No:	RCS-310MDB1
Technical Variants:	N/A
FCC ID No.	TG6RCS-310MDB1
IC ID No.	N/A

2 Tests Required

The product was tested in accordance with the following specifications.
The test results recorded in this Test Report are exclusively referred to the tested sample(s).

Test Standard		Description	Pass / Fail
47 CFR Part 15.231: 2007			
15.203		Antenna Requirement	Pass
15.207		Conducted Emissions Voltage	N/A
15.231 (b)		Fundamental & Radiated Spurious Emission Limits	Pass
15.231 (c)		20 dB Bandwidth	Pass
15.231 (a)(1)		Deactivation	Pass
ANSI C63.4: 2003 / RSS-Gen Issue 2: 2007			

Notes:

1) Deviations to above standards are outlined in specific test sections if applicable. Cable loss and external attenuation are compensated for in the measurement system when applicable.

2) This EUT is powered by battery, no 15.207 test is required.

3 Antenna Requirement

Requirement(s): 47 CFR §15.203

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

Antenna requirement must meet at least one of the following:

a) Antenna must be permanently attached to the device.

b) Antenna must use a unique type of connector to attach to the device.

c) Device must be professionally installed. Installer shall be responsible for ensuring that the correct antenna is employed with the device.

This EUT antenna is attached permanently to the device which meets the requirement.

4 Measurements, Examinations and Derived Results

4.1 General observations

Equipment serial number(s)		
EUT:	Model number:	Serial number:
Remote Control Transmitter	RCS-310MDB1	none

4.2 Test Results

4.2.1 Radiated Fundamental & Spurious Emissions

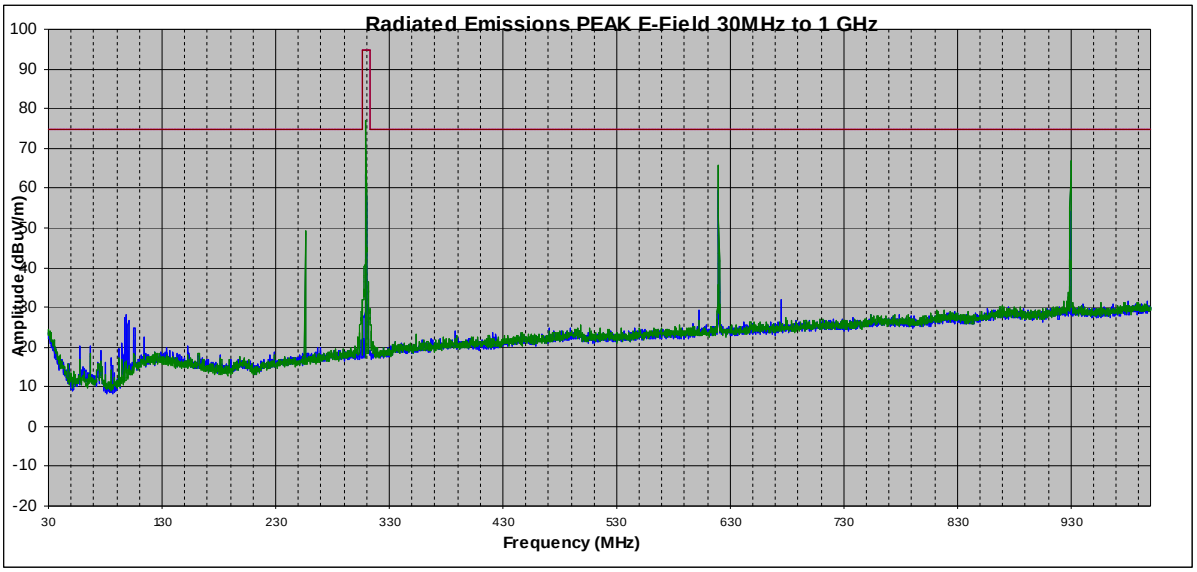
Requirement(s): 47 CFR §15.231; 47 CFR §15.209 & 15.205

Procedures: Radiated emissions were measured according to ANSI C63.4. The EUT was set to transmit at the highest output power. The EUT was set 3 meter away from the measuring antenna. The measuring bandwidth was set to BW =120 kHz for < 1 GHz , BW = 1MHz for > 1 GHz. EUT was tested under three orthogonal plans

The limit is converted from microvolts/meter to decibel microvolts/meter.

Sample Calculation:
1) Corrected Amplitude = Raw Amplitude(dBµV/m) + ACF(dB) + Cable Loss(dB) – Distance Correction Factor
2) Pulse average reading = Peak reading + 20 log (Duty cycle).

Results:



Please Note : The above data and limit are based on Peak Detector

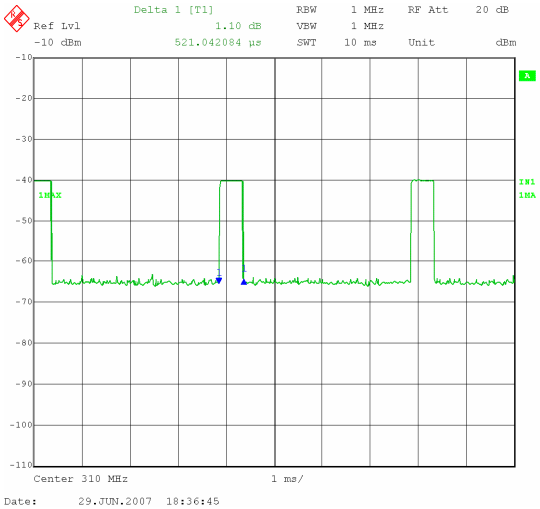
Frequency	Azimuth	Measure	Antenna Polarity	Antenna Height	Raw Amplitude @ 3m	ACF	CBL loss	Distance Correction Factor	Corrected Amplitude @ 3 m	FCC 15.231 Limit @3m	Margin
(MHz)	(degrees)	(Avg/QP)	(H/V)	(m)	(dBuV/m)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)
310.00	180	AVE	H	1.5	70.41	14	1.5	17.7	68.21	75.3	-7.09
310.00	200	Peak	H	1.2	70.41	14	1.5	0	85.91	95.3	-9.39
310.00	180	AVE	V	1.5	45.90	13.8	1.5	17.7	43.5	75.3	-31.80
310.00	200	Peak	V	1.2	45.90	13.8	1.5	0	61.2	95.3	-34.10
620.00	180	AVE	H	1.5	45.92	19	1.9	17.7	49.12	55.3	-6.18
620.00	200	Peak	H	1.2	45.92	19	1.9	0	66.82	75.3	-8.48
620.00	180	AVE	V	1.5	35.98	19.2	1.9	17.7	39.38	55.3	-15.92
620.00	200	Peak	V	1.2	35.98	19.2	1.9	0	57.08	75.3	-18.22
930.00	180	AVE	H	1.5	38.50	22.6	2.4	17.7	45.8	55.3	-9.50
930.00	200	Peak	H	1.2	38.50	22.6	2.4	0	63.5	75.3	-11.80
930.00	180	AVE	V	1.5	29.97	22.3	2.4	17.7	36.97	55.3	-18.33
930.00	200	Peak	V	1.2	29.97	22.3	2.4	0	54.67	75.3	-20.63

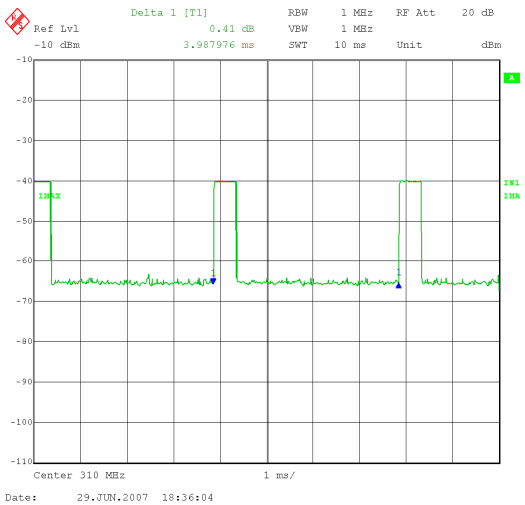
Note :

1) Measuring frequencies from 30 MHz to 4 GHz. .
2) The levels of the emissions above 1 GHz were too low to be measured.

Pulse Duty Cycle :

Average Duty Factor : 20 * Log (521/4000) = 17.7 dBi





Tested By: Benjamin Jing
Date Tested: 29 June 2007

4.2.2 20 dB Bandwidth

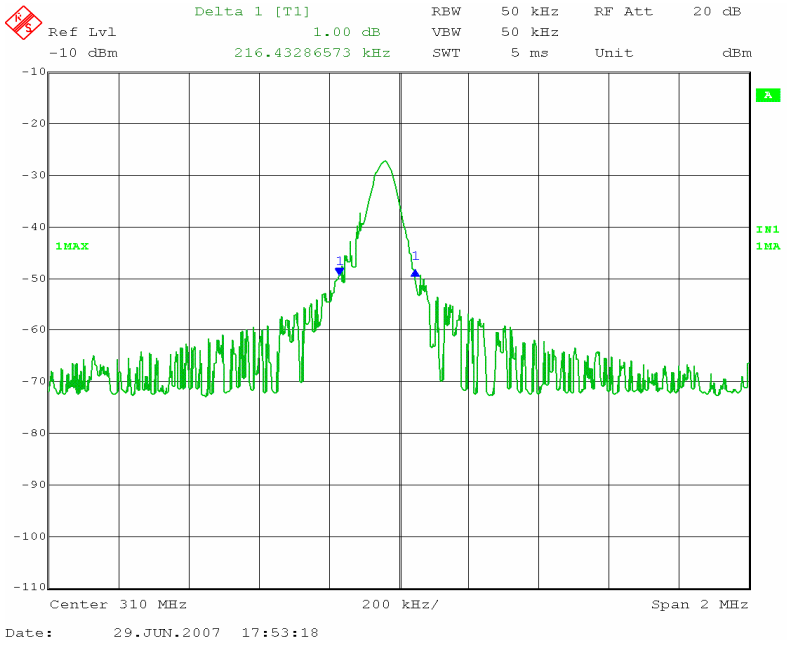
Requirement(s): 47 CFR §15.231 (c)

Procedures:

The EUT was set to transmit at the highest output power, its output was connected to the spectrum analyzer.

Results:

Fundamental Frequency (MHz)	Measured 20 dB Bandwidth (KHz)	FCC 15.231 Limit (KHz)	Result
300	216	775	Pass



Tested By: Benjamin Jing
Date Tested: 29 June 2007

4.2.3 Deactivation

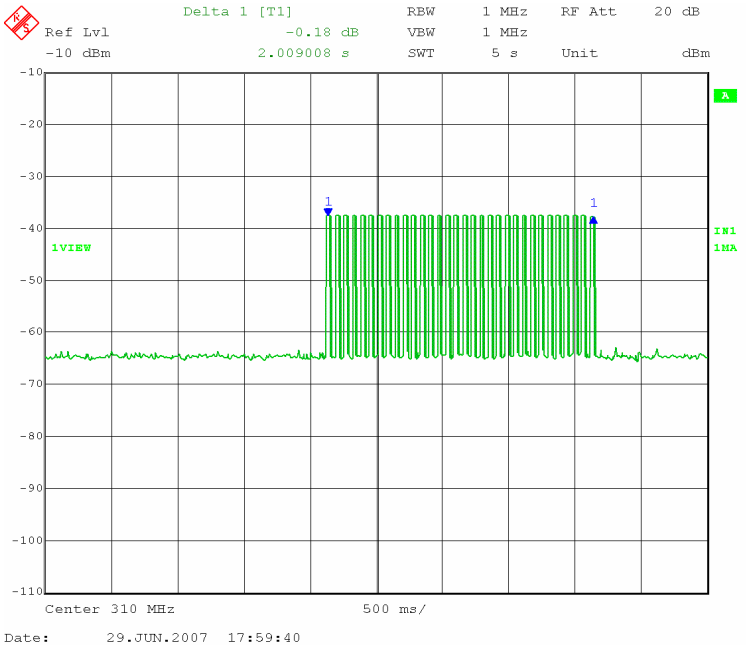
Requirement(s): 47 CFR §15.231 (a)

Procedures:

The EUT was set to transmit at the highest output power, its output was connected to the spectrum analyzer.

Results: Pass

Release Time < 5 seconds



Tested By: Benjamin Jing
Date Tested: 29 June 2007

TEST INSTRUMENTATION

4.3 TEST INSTRUMENTATION

Instrument	Manufacturer	Model	CAL Due Date
Spectrum Analyzer	HP	8568B	04/26/2008
Quasi-Peak Adapter	HP	85650A	04/26/2008
RF Pre-Selector	HP	85685A	04/26/2008
Spectrum Analyzer	HP	8564E	05/01/2008
Antenna	EMCO	JB1	09/11/2007
Pre-Amplifier	HP(1G~26.5G)	8449	05/01/2008
Horn Antenna	COM Power(18G~40G)	AH-840	03/19/2010
Horn Antenna	EMCO(1G~18G)	3115	08/17/2007

Note: Functional Verification

APPENDIX A: EUT TEST CONDITIONS

The following is the description of supporting equipment and details of cables used with the EUT.

Equipment Description (Including Brand Name)	Cable Description
Remote Control Transmitter	N/A

EUT Description	:	Remote Control Transmitter
Model No	:	RCS-310MDB1
Serial No	:	none

The following is the description of how the EUT is exercised during testing.

Test	Description Of Operation
All testing	The EUT was set transmitting when push the button.

APPENDIX B: EXTERNAL PHOTOS

See Attachment

APPENDIX C: CIRCUIT/BLOCK DIAGRAMS

See Attachment

APPENDIX D: INTERNAL PHOTOS

See Attachment

APPENDIX E: PRODUCT DESCRIPTION

Detail description of this product is shown in the User's Guide.

APPENDIX F: FCC LABEL LOCATION

See Attachment

APPENDIX G: USER MANUAL

See Attachment

END OF REPORT