

FCC Test Report

E4064047401DW

Type / Model Name: CC-GTR433

Product Description: Remote Receiver

Applicant: Controlled Entry Distributors, Inc.

FCC ID: SU7GTR433

FCC -- TEST REPORT

Test Report No. : E4064047401DW	November 4, 2008 Date of issue
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Type / Model Name : CC-GTR433

Product Description : Remote Receiver

Applicant : Controlled Entry Distributors, Inc.

Address : 2500 south 3850 West

Suite A, SlT Lake City

Utah 84120, USA

Test Result according to the standards listed in clause 1 test standards:	PASS
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The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test results without the written permission of the test laboratory.

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1 TEST STANDARDS

The tests were performed according to following standards:

FCC Part 15, July 10, 2008

Federal Communications Commission, Part 15 – Radio
Frequency Device

ANSI C63.4:2003

Method of Measurement of Radio-Noise Emissions from Low-
Voltage Electrical and Electronic Equipment in the Range of
9 kHz to 40 GHz

2 SUMMARY

GENERAL REMARKS:

None

FINAL ASSESSMENT:

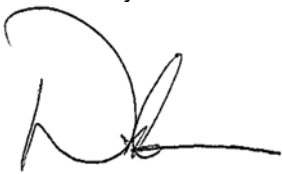
The equipment under test fulfils the technical requirement cited in FCC Part 15 subpart B

Date of receipt of test sample : September 24, 2008

Testing commenced on : September 24, 2008

Testing concluded on : November 4, 2008

Reviewed by:



Wilson Loke
Senior Manager

Prepared by:



Davis Wei
Engineer

3 EQUIPMENT UNDER TEST

3.1 Photo documentation of the EuT



Front View



Back View

3.2 Power supply system utilised

Power supply voltage: 12VDC

3.3 Short description of the Equipment under Test (EuT)

The Equipment under test (EUT) is a 434MHz superregenerative receiver. The main function of the EUT is acted as a remote receiver to control the on/off of the garage door. When the receiver receive the signal from transmitter, it will decode the transmitted signal to give a control on the open or close the garage door. The EUT is powered by 12Vdc

Number of tested samples: One
 Serial number: Not Labelled
 Dimensions: L: 7.0cm W: 3.7cm H: 2.0cm

EuT operation mode:

The equipment under test was operated during the measurement under the following conditions:

- Operation mode 1:Receiving mode _____
- Operation mode 2: N/A _____
- Operation mode 3: N/A _____

EuT configuration:

(The CDF filled by the applicant can be viewed at the test laboratory.)

The following peripheral devices and interface cables were connected during the measurements:

- AC/DC adaptor _____ Model : WINSTAR NA-7 _____
- _____ Model : _____
- _____ Model : _____
- _____ Model : _____
- _____ Model : _____
- _____ Model : _____

4 TEST ENVIRONMENT

4.1 Address of the test laboratory

**emitel (Shenzhen) Limited
Building 2, 171 Meihua Road,
Futian District,
Shenzhen, 518049
China**

FCC Registration No.: 746887

4.2 Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature: 15-35 ° C

Humidity: 30-60 %

Atmospheric pressure: 86-106 kPa

4.3 Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16-4-2 /11.2003 „Uncertainties, statistics and limit modelling – Uncertainty in EMC measurements“ and is documented in the quality system acc. to ISO 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

5 TEST CONDITIONS AND RESULTS

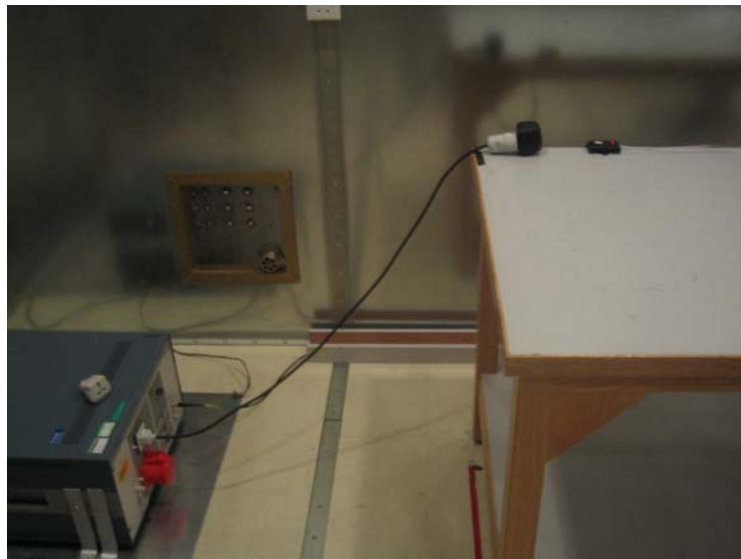
5.1 Conducted Emission

For test instruments and accessories used see section 6.

5.1.1 Description of the test location

Test location: Shield room

5.1.2 Photo documentation of test



5.1.3 Test result

Frequency range: 0.15MHz to 30MHz

Min. limit margin: >20 dB

The requirements of section 15.107 are **FULFILLED**.

Remarks:

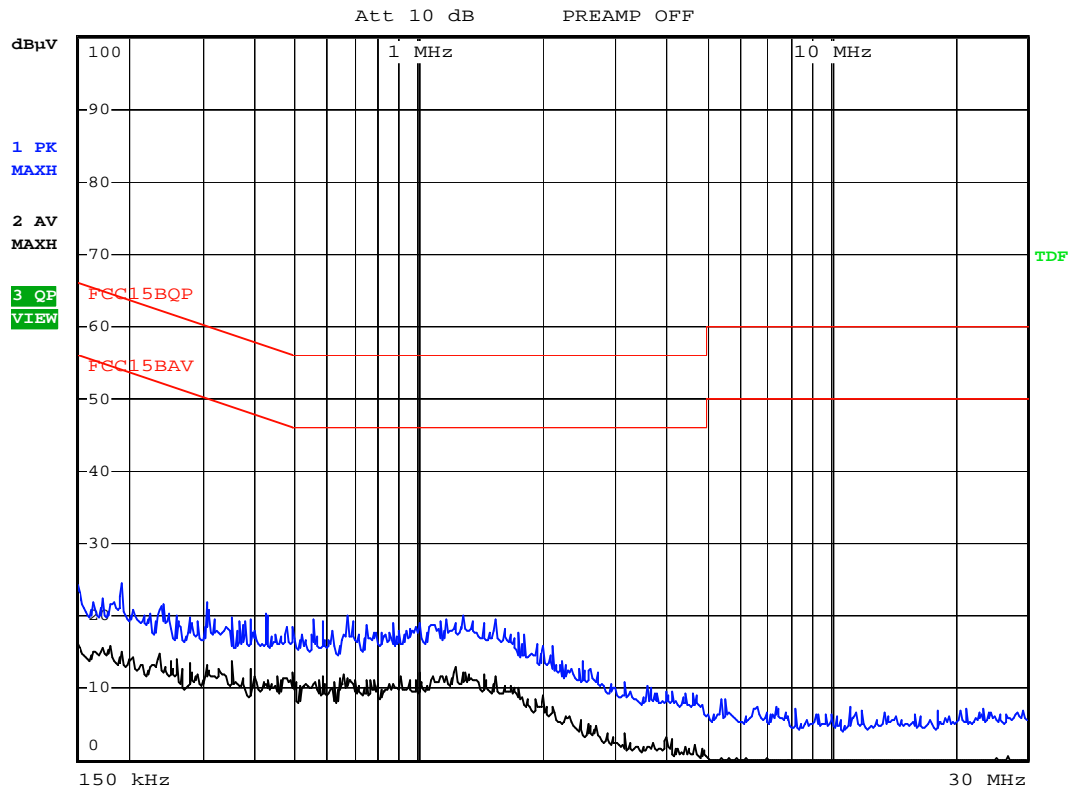
5.1.4 Test protocol

Test point: L1
 Operation mode: Receiving mode
 Date: Sept 25, 2008
 Tested by: Davis Wei

Result: Pass

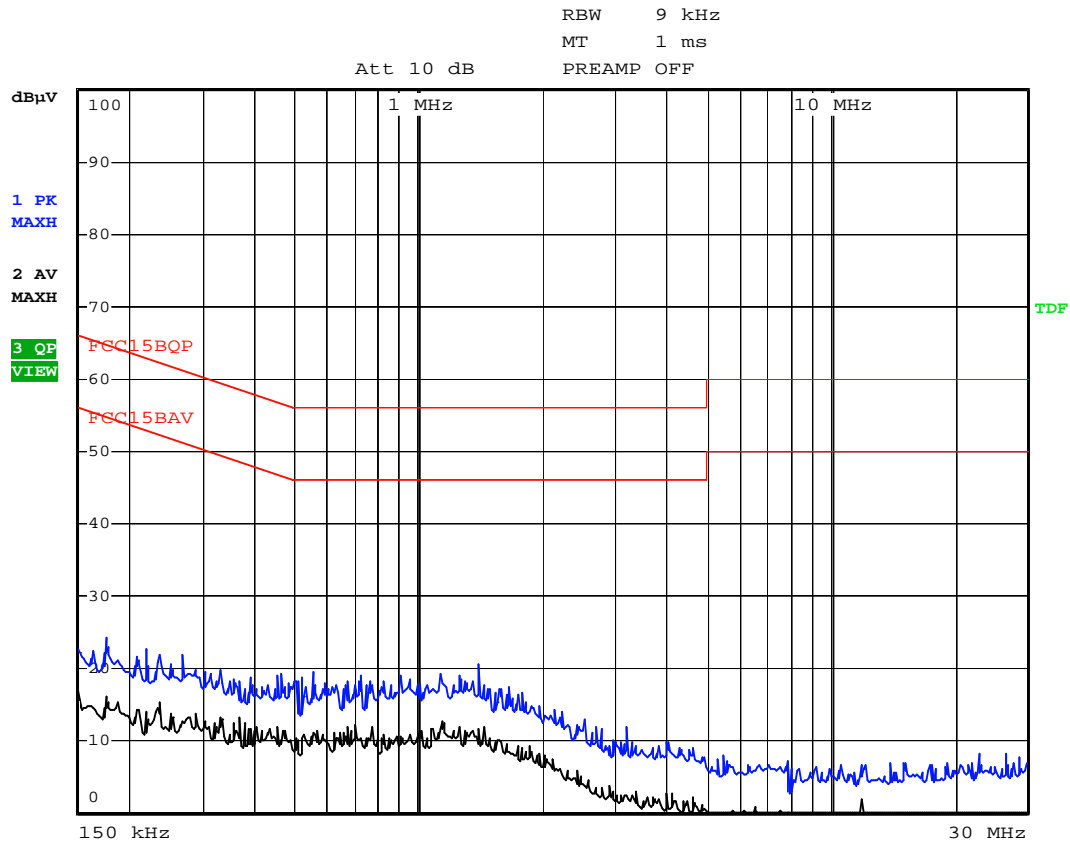
Mains Volt. Test
 13.Nov 08 16:10

RBW 9 kHz
 MT 100 ms
 PREAMP OFF



Test point: N
 Operation mode: Receiving mode
 Date: Sept 25, 2008
 Tested by: Davis Wei

Result: Pass



5.2 Radiated Emission

For test instruments and accessories used see section 6.

5.2.1 Description of the test location

Test location: Semi-anecholic Chamber

Test distance: 3m

5.2.2 Photo documentation of test



5.2.3 Test result

Frequency range: 30MHz to 4000MHz

Min. limit margin: 13.2dB

The requirements of section 15.109 are **FULFILLED**.

Remarks:

5.2.4 Test protocol

Worst Case Operation mode: Receiving mode

Result: PASS

Remarks:

Date: September 25, 2008

Tested by: Davis Wei

Polari- zation	Frequency [MHz]	Measured QP Value [dB μ V]	Correction factor [dB/m]	Result QP value [dB μ V/m]	Limit QP [dB μ V/m]	Margin QP [dB]
H	414.520	10.2	18.3	28.5	46.0	-17.5
H	418.870	12.7	18.3	31.0	46.0	-15.0
H	417.320	14.5	18.3	32.8	46.0	-13.2
H	418.730	12.5	18.3	30.8	46.0	-15.2
H	420.120	10.3	18.3	28.6	46.0	-17.4
H	834.640	3.1	21.4	24.3	46.0	-21.7

Polari- zation	Frequency [MHz]	Measured PK Value [dB μ V]	Correction factor [dB/m]	Result PK value [dB μ V/m]	Limit PK [dB μ V/m]	Margin PK [dB]
H	1251.960	2.7	29.8	32.5	74.0	-41.5
H	1669.280	4.6	33.0	37.6	74.0	-36.4

Polari- zation	Frequency [MHz]	Measured AV Value [dB μ V]	Correction factor [dB/m]	Result AV value [dB μ V/m]	Limit AV [dB μ V/m]	Margin AV [dB]
H	1251.960	-1.3	29.8	28.5	54.0	-25.5
H	1669.280	1.0	33.0	34.0	54.0	-20.0

- Remark: 1) The emissions lower than 20dB below the limit are not measured.
 2) QP Detector is used for the measurement.
 3) Correction Factor is including the antenna factor and cable factor.
 4) Result = Measured data + Correction factor
 5) EuT is oriented thru three orthogonal direction and the worst case test result is recorded.
 6) Quasi-Peak detector is used for emission below 1000MHz
 7) Average detector and Peak detector is used for emission above 1000MHz

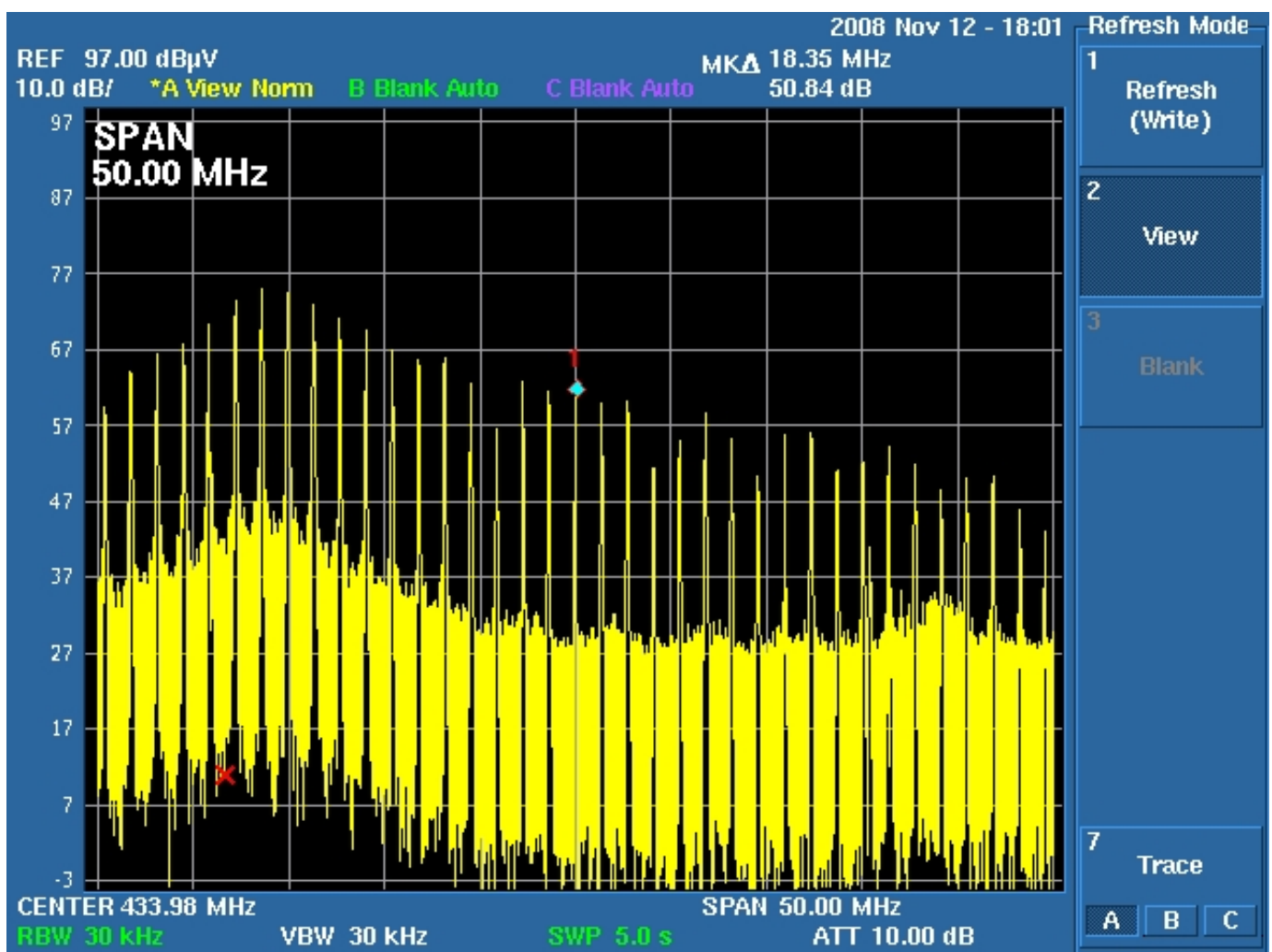
6 SUPERREGENERATIVE RECEIVER MEASUREMENT

A signal generator, not the matching transmitter, is used to radiate an unmodulated CW signal to a superregenerative receiver at the operating frequency in order to “cohere” or to resolve the individual components of the characteristic broadband emission from such a receiver. The level of the signal is increased for this occur.

If the superregenerative receiver is tested for radiated smissionwith a resistive termination instead of an antenna connected to the antenna imput terminal, apply the unmodulated signal at a level of approximately -60dBm to antenna terminal, using an impedance-matchign network if necessary, to “cohere” the emission. It is necessary to adjust the signal level to accomplish this.

Signal Generator Frequency used: 433.98MHz

Supperregenerative receiver stabilzation plot:



7 USED TEST EQUIPMENT AND ACCESSORIES

All test instruments used, in addition to the test accessories, are calibrated and verified regularly.

Test Item	Model / Type	Kind of Equipment	Manufacturer	Equipment No.
Radiated Emission	ESPI3	EMI Test Receiver	Rohde & Schwarz	04-02/03-06-002
	U3772	Spectrum Analyzer	Advantest	04-02/11-08-001
	3142C	Biconilog Antenna	EMCO	04-02/24-06-001
	3117	Horn Antenna	ETS Lindgren	04-02/24-07-001
	SML03	Signal Generator	Rohde & Schwarz	04-02/05-06-002
Conducted Emission	ESPI3	EMI Test Receiver	Rohde & Schwarz	04-02/03-06-002
	ESH2-Z5	LISN	Rohde & Schwarz	04-02/03-06-001