

**DATE: 02 July 2008**

**I.T.L. (PRODUCT TESTING) LTD.  
FCC EMC/Radio Test Report  
for  
Risco Ltd.**

**Equipment under test:**

**2-Button Panic Keyfob**

**RWT52P43300A**

Written by: *E. Ever*  
E. Ever, Documentation

Approved by: *A. Sharabi*  
A. Sharabi, Test Engineer

Approved by: *I. Raz*  
I. Raz, EMC Laboratory Manager

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This report relates only to items tested.

## Measurement/Technical Report for Risco Ltd.

### 2-Button Panic Keyfob

RWT52P43300A

FCC ID: JE4RWT5XP

IC ID: 6564A-RWT5XP

02 July 2008

This report concerns: Original Grant  Class II change

Class B verification  Class A verification  Class I change

Equipment type: Part 15 Security/Remote Control Transceiver

Request Issue of Grant:

Immediately upon completion of review

Limits used:

47 CFR Part 15 Subpart B, C

Measurement procedure used is ANSI C63.4-2003.

Application for Certification

prepared by:

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Applicant for this device:

(different from "prepared by")

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# 1. General Information

## 1.1 Administrative Information

Manufacturer:	Risco Ltd.
Manufacturer's Address:	14 Hachoma St. 75655 Rishon LeT'zion Israel Tel: +972-3-9637742 Fax: +972-03-9616584
Manufacturer's Representative:	Efi Goren
Equipment Under Test (E.U.T):	2-Button Panic Keyfob
Equipment Model No.:	RWT52P43300A
Equipment Serial No.:	Not Designated
Date of Receipt of E.U.T:	15/06/2008
Start of Test:	15/06/2008
End of Test:	17/06/2008
Test Laboratory Location:	I.T.L (Product Testing) Ltd. Kfar Bin Nun, ISRAEL 99780
Test Specifications:	FCC Part 15 Sub-part C

## **1.2 List of Accreditations**

The EMC laboratory of I.T.L. is accredited by the following bodies:

1. The American Association for Laboratory Accreditation (A2LA) (U.S.A.), Certificate No. 1152.01.
2. The Federal Communications Commission (FCC) (U.S.A.), Registration No. 90715.
3. The Israel Ministry of the Environment (Israel), Registration No. 1104/01.
4. The Voluntary Control Council for Interference by Information Technology Equipment (VCCI) (Japan), Registration Numbers: C-1350, R-1285.
5. Industry Canada (Canada), File No. IC 4025.
6. TUV Product Services, England, ASLLAS No. 97201.
7. Nemko (Norway), Authorization No. ELA 207.

I.T.L. Product Testing Ltd. is accredited by the American Association for Laboratory Accreditation (A2LA) and the results shown in this test report have been determined in accordance with I.T.L.'s terms of accreditation unless stated otherwise in the report.

### **1.3 Product Description**

The EUT is a wireless 433.92MHz panic transmitter. The unit includes a small PCB powered by a 3V CR123 lithium battery, inside a plastic enclosure.

The unit has an integral PCB printed antenna, and a transmitter IC manufactured by Melexis. The unit transmits at approximately 666 bps.

### **1.4 Test Methodology**

Both conducted and radiated testing were performed according to the procedures in ANSI C63.4: 2003. Radiated testing was performed at an antenna to EUT distance of 3 meters.

### **1.5 Test Facility**

The radiated emissions tests were performed at I.T.L.'s testing facility at Kfar Bin-Nun, Israel. This site is a FCC listed test laboratory (FCC Registration No. 90715, date of listing August 22, 2006).

I.T.L.'s EMC Laboratory is also accredited by A2LA, certificate No. 1152.01.

### **1.6 Measurement Uncertainty**

#### **Radiated Emission**

The Open Site complies with the  $\pm 4$  dB Normalized Site Attenuation requirements of ANSI C63.4-2003. In accordance with Paragraph 5.4.6.1 of this standard, this tolerance includes instrumentation calibration errors, measurement technique errors, and errors due to site anomalies.

## 2. Product Labeling



Figure 1. FCC Label



FCC  
Label  
Location

Figure 2. Location of Label on EUT

## 3. System Test Configuration

### 3.1 *Justification*

To determine the E.U.T. antenna orientation for all tests, the product carrier field level was measured with the E.U.T. in 3 orthogonal positions.

The vertical position of the E.U.T. was selected as the worst case final orientation position.

### 3.2 *EUT Exercise Software*

Manufacturing software was used for all the tests.

### 3.3 *Special Accessories*

A test jig was used to support the E.U.T.

### 3.4 *Equipment Modifications*

No modifications were needed in order to achieve compliance

### 3.5 *Configuration of Tested System*

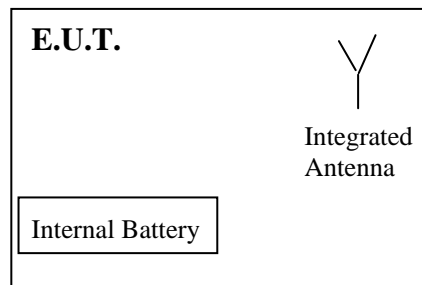


Figure 3. Configuration of Tested System



## 4. Block Diagram

### 4.1 Schematic Block/Connection Diagram

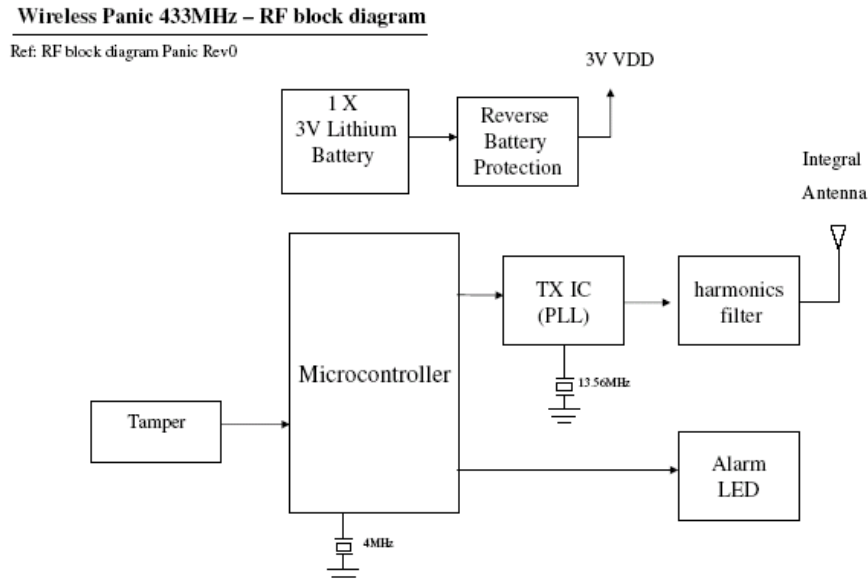


Figure 4. Block Diagram

### 4.2 Theory of Operation

Modulation is On-Off keying using Manchester code. The unit has two kinds of transmissions:

1. Panic alarm transmission - transmitted when the button (or 2-buttons) are pressed.
2. Low battery - generated when the battery voltage drops below 2.6V.

### 4.3 Average Factor Calculation

Average Factor Calculation = -10.1

See Section 9 Appendix A – Average Factor Designation.

## 5. Spurious Emissions Transmission Mode

### 5.1 Test Specification

F.C.C., Part 15, Subpart C, Section 15.231(e)

### 5.2 Test Procedure

The E.U.T. operation mode and test set-up are as described in Section 3.

The E.U.T. was placed on a non-conductive table, 0.8 meters above the O.A.T.S. ground plane.

The EMI receiver was set to the E.U.T. Fundamental Frequency (433.9 MHz) and Peak Detection.

The turntable and antenna mast were adjusted for maximum level reading on the EMI receiver.

The measurement was performed for vertical and horizontal polarizations of the test antenna.

The average result is:

Peak Level(dB $\mu$ V/m) + E.U.T. Duty Cycle Factor, in 100msec time window (dB)

### 5.3 Measured Data

JUDGEMENT: Passed by 17.0 dB

The margin between the emission level and the specification limit was 17.0 dB in the worst case at the frequency of 496.50 MHz, horizontal polarization.

The EUT met the FCC Part 15, Subpart C, Section 15.231(e) specification requirements.

The details of the highest emissions are given in *Figure 5* to *Figure 6*.

TEST PERSONNEL:

Tester Signature:  \_\_\_\_\_

Date: 02.07.2008

Typed/Printed Name: A. Sharabi

## Spurious Emission Transmission Mode

E.U.T Description 2-Button Panic Keyfob  
 Type RWT52P43300A  
 Serial Number: Not Designated

Specification: F.C.C., Part 15, Subpart C, 15.231(e)

Antenna Polarization: Horizontal/Vertical

Test Distance: 3 meters

Detector: Peak

<b>Freq.</b>	<b>Pol.</b>	<b>Peak Amp</b>	<b>Peak Specification</b>	<b>Margin</b>
(MHz)	V/H	(dB $\mu$ V/m)	(dB $\mu$ V/m)	(dB)
372.00	V	30.3	80.8	-50.5
372.00	H	35.7	80.8	-45.1
496.50	V	36.8	80.8	-44.0
496.50	H	42.1	80.8	-37.7
805.40	V	33.1	80.8	-47.7
805.40	H	44.9	80.8	-35.9
930.50	V	37.5	80.8	-43.3
930.50	H	34.7	80.8	-46.1
1239.50	V	52.2	74.0	-21.8
1239.50	H	50.2	74.0	-23.8
2169.40	V	52.5	80.8	-28.3
2169.40	H	55.3	80.8	-25.5

**Figure 5. Field Strength of Fundamental. Antenna Polarization: HORIZONTAL/VERTICAL. Detector: Peak**

**Notes:**

1. Margin refers to the test results obtained minus specified requirement; thus a positive number indicates failure, and a negative result indicates that the product passes the test.
2. "Peak Amp." (dB $\mu$ V/m) included the "Correction Factors".
3. "Correction Factors" (dB) = Test Antenna Correction Factor(dB) + Cable Loss.

## Spurious Emission Transmission Mode

E.U.T Description 2-Button Panic Keyfob  
 Type RWT52P43300A  
 Serial Number: Not Designated

Specification: F.C.C., Part 15, Subpart C, 15.231(e)

Antenna Polarization: Horizontal/Vertical

Test Distance: 3 meters

Detector: Peak (Average Calculation)

Freq.	Pol.	Average Amp	Average Specification	Margin
(MHz)	V/H	(dB $\mu$ V/m)	(dB $\mu$ V/m)	(dB)
372.0	V	35.5	60.8	-25.3
372.0	H	34.4	60.8	-26.4
496.5	V	41.6	60.8	-19.2
496.5	H	43.0	60.8	-16.8
805.4	V	27.0	60.8	-32.8
805.4	H	24.2	60.8	-36.6
930.5	V	22.7	60.8	-38.1
930.5	H	34.5	60.8	-26.3
1239.5	V	26.4	54.0	-27.6
1239.5	H	31.7	54.0	-22.3
2169.4	V	19.8	60.8	-41.0
2169.4	H	25.2	60.8	-35.6

**Figure 6. Field Strength of Fundamental. Antenna Polarization: HORIZONTAL/VERTICAL. Detector: Average**

### Notes:

1. Margin refers to the test results obtained minus specified requirement; thus a positive number indicates failure, and a negative result indicates that the product passes the test.
2. "Peak Amp." (dB $\mu$ V/m) included the "Correction Factors".
3. "Correction Factors" (dB) = Test Antenna Correction Factor(dB) + Cable Loss.

# Spurious Emission Harmonics

E.U.T Description 2-Button Panic Keyfob  
 Type RWT52P43300A  
 Serial Number: Not Designated

Specification: F.C.C., Part 15, Subpart C, 15.231(e)

Antenna Polarization: Horizontal  
 Test Distance: 3 meters

Second Harmonic  
 Detectors: Peak, Quasi-peak, Average

09:50:53 JUN 15, 2008

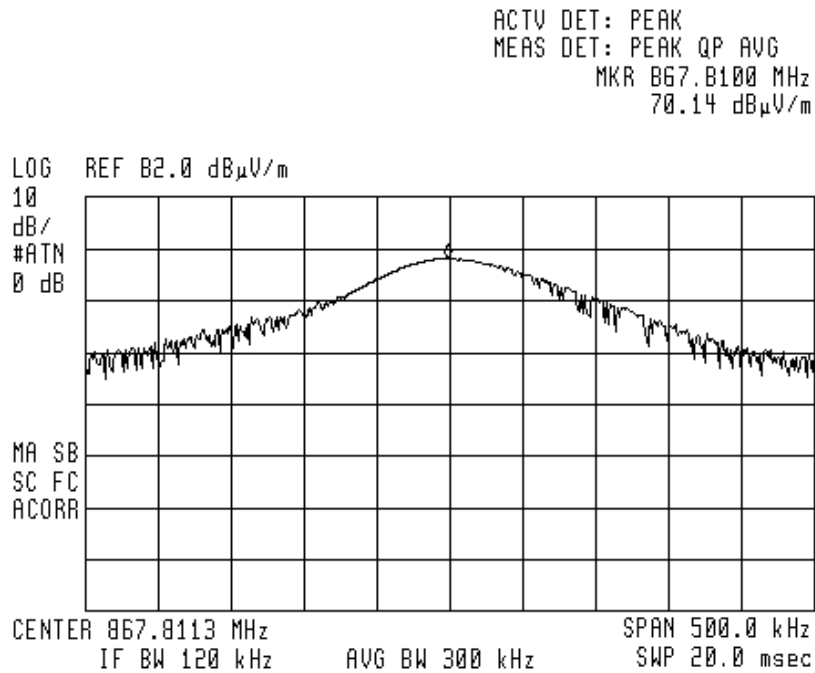


Figure 7. 867.8113 MHz

$$\text{Avg Limit} = 80.8 \text{ dB}\mu\text{V/m} - 20\text{dB} = 60.6 \text{ dB}\mu\text{V/m}$$

$$\text{Peak} = 70.1 \text{ dB}\mu\text{V/m}$$

$$\text{Avg} = 70.1 - 10.1 = 60.0 \text{ dB}\mu\text{V/m}$$

## Spurious Emission Harmonics

E.U.T Description 2-Button Panic Keyfob  
 Type RWT52P43300A  
 Serial Number: Not Designated

Specification: F.C.C., Part 15, Subpart C, 15.231(e)

Antenna Polarization: Vertical  
 Test Distance: 3 meters

Third Harmonic  
 Detectors: Peak, Quasi-peak, Average

10:06:03 JUN 15, 2008

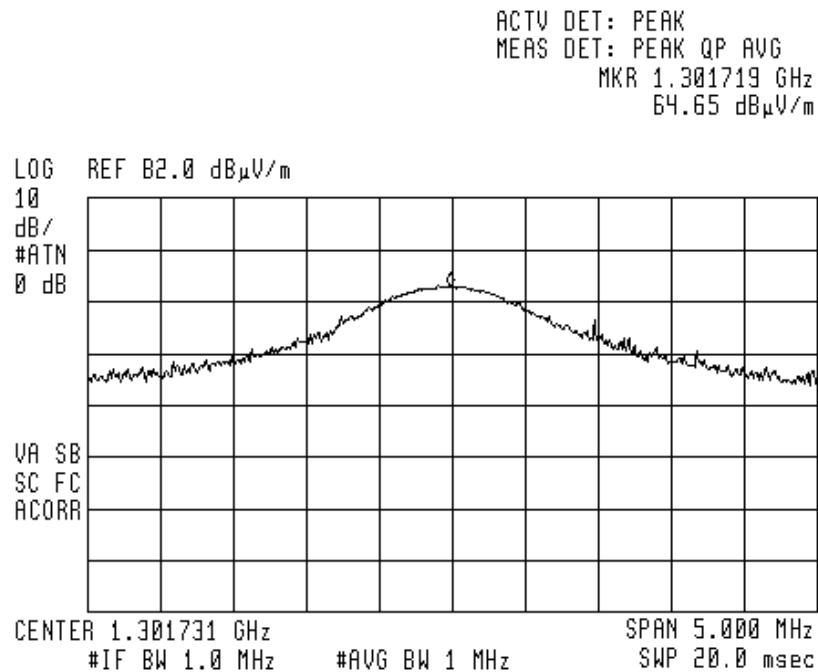


Figure 8. Center Frequency 1.302 GHz

### Restricted band

**Peak Limit = 74.0 dB $\mu$ V/m**

**Average Limit = 54.0 dB $\mu$ V/m**

**Peak Result = 64.7 dB $\mu$ V/m**

**Average Result = 49.6 dB $\mu$ V/m**

# Spurious Emission Harmonics

E.U.T Description 2-Button Panic Keyfob  
 Type RWT52P43300A  
 Serial Number: Not Designated

Specification: F.C.C., Part 15, Subpart C, 15.231(e)

Antenna Polarization: Vertical  
 Test Distance: 3 meters

Fourth Harmonic  
 Detectors: Peak, Quasi-peak, Average

10:12:55 JUN 15, 2008

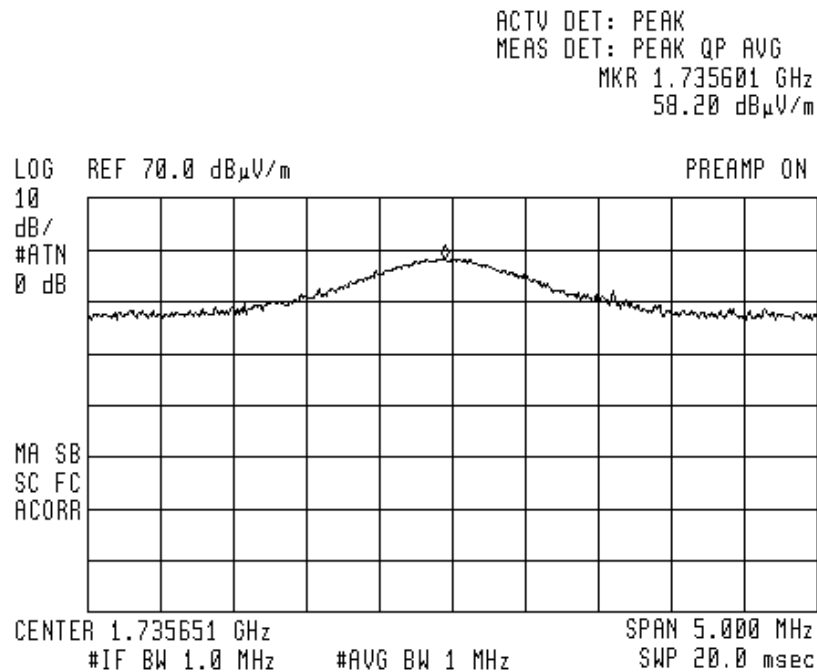


Figure 9. 1.736 GHz

**Restricted band**  
**Peak Limit = 80.8 dBuV/m**  
**Average Limit = 60.8 dBuV/m**  
**Peak Result = 58.2 dBuV/m**  
**Average Result = 45.2 dBuV/m**

## Spurious Emission Harmonics

E.U.T Description 2-Button Panic Keyfob  
 Type RWT52P43300A  
 Serial Number: Not Designated

Specification: F.C.C., Part 15, Subpart C, 15.231(e)

Antenna Polarization: Horizontal/Vertical

Test Distance: 3 meters

Detector: Peak

<b>Freq.</b>	<b>Pol.</b>	<b>Peak Amp</b>	<b>Peak Specification</b>	<b>Margin</b>
(MHz)	V/H	(dB $\mu$ V/m)	(dB $\mu$ V/m)	(dB)
867.81	H	70.1	80.8	-10.7
1302.00	V	64.7	74.0	-9.3
1736.00	V	58.2	80.8	-22.6

**Figure 10. Field Strength of Fundamental. Antenna Polarization: HORIZONTAL/VERTICAL. Detector: Average**

### Notes:

1. Margin refers to the test results obtained minus specified requirement; thus a positive number indicates failure, and a negative result indicates that the product passes the test.



## Spurious Emission Harmonics

E.U.T Description 2-Button Panic Keyfob  
 Type RWT52P43300A  
 Serial Number: Not Designated

Specification: F.C.C., Part 15, Subpart C, 15.231(e)

Antenna Polarization: Horizontal/Vertical

Test Distance: 3 meters

Detector: Average (with Peak Calculation)

<b>Freq.</b>	<b>Pol.</b>	<b>Average Amp</b>	<b>Peak Specification</b>	<b>Margin</b>
(MHz)	V/H	(dB $\mu$ V/m)	(dB $\mu$ V/m)	(dB)
867.81	H	60.0	60.8	-0.8
1302.00	V	49.6	54.0	-4.4
1736.00	V	45.2	60.8	-15.6

**Figure 11. Field Strength of Fundamental. Antenna Polarization: HORIZONTAL/VERTICAL. Detector: Average**

### Notes:

1. Margin refers to the test results obtained minus specified requirement; thus a positive number indicates failure, and a negative result indicates that the product passes the test.

#### 5.4 Test Instrumentation Used

Instrument	Manufacturer	Model	Serial Number	Calibration	Period
EMI Receiver	HP	85422E	3411A00102	November 12, 2007	1 year
RF Section	HP	85420E	3427A00103	November 12, 2007	1 year
Antenna Log Periodic	ARA	LPD-2010/A	1038	November 22, 2007	1 year
Antenna Mast	ARA	AAM-4A	1001	N/A	N/A
Turntable	ARA	ART-1001/4	1001	N/A	N/A
Mast & Table Controller	ARA	ACU-2/5	1001	N/A	N/A
Printer	HP	LaserJet 2200	JPKG19982	N/A	N/A

## 6. Maximum Transmitting Power

### 6.1 Test Specification

F.C.C., Part 15, Subpart C, Section 15.231(e)

### 6.2 Test Procedure

The test was performed to measure the transmitter maximum transmitting power. The EUT was setup as shown in Figure 3 and its proper operation was checked.

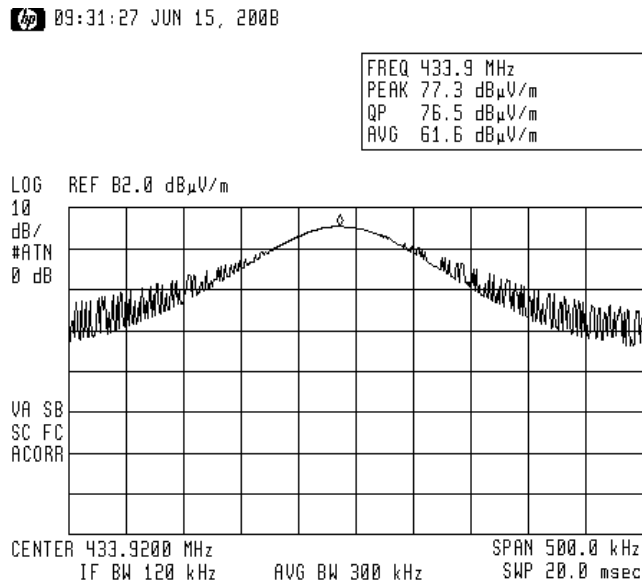


Figure 12. Field Strength of Fundamental

### 6.3 Test Data

E.U.T Description: 2-Button Panic Keyfob

Model: RWT52P43300A

Serial Number: Not Designated

JUDGEMENT: Passed

The EUT met the requirements of the F.C.C. Part 15, Subpart C specification

Peak Reading (dBuV/m)	Specification (dBuV/m)	Margin (dB)
77.4	100.8	-22.6

**Figure 13. Peak Result**

Average Reading (dBuV/m)	Specification (dBuV/m)	Margin (dB)
67.2*	80.8	-13.6

**Figure 14. Average Result**

EUT: Max power at vertical orientation

\* **Average Result** = Peak Result – Avg Factor = 77.3 – 10.1

TEST PERSONNEL:

Tester Signature: 

Date: 02.07.2008

Typed/Printed Name: A. Sharabi

## 7. Periodic Operation Requirements

### 7.1 Test Specification

30 - 2000 MHz, F.C.C., Part 15, Subpart C: 15.231(a)(1-5)

### 7.2 Test Procedure

The EUT was set up as shown in Figure 3. The spectrum analyzer center frequency was adjusted to the EUT carrier, the span was set to zero and the video triggered for transmissions. The transmitter was activated manually until it was fully functional. The button for activation was released and the transmission time was captured.

The EUT was verified for compliance with periodic operation requirements.

1. Continuous transmissions was not permitted.
2. A mutually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 seconds of being released.
3. Periodic transmission, excluding polling or supervision transmissions, at regular predetermined intervals are not permitted.

The rationale for compliance with the above requirements was determined by test results and a supplier declaration.

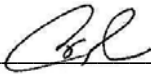
### 7.3 **Test Data**

JUDGEMENT:                      Passed

The EUT met the requirements of the F.C.C. Part 15, Subpart C specification

The EUT was found not to operate continuously and it deactivated within 1.725 seconds of being released. The EUT did not have periodic transmission, excluding polling or supervision transmissions, at regular predetermined intervals

TEST PERSONNEL:

Tester Signature: \_\_\_\_\_  \_\_\_\_\_ Date: 02.07.2008

Typed/Printed Name: A. Sharabi

# Periodic Operation Requirements

E.U.T Description    2-Button Panic Keyfob  
 Type                    RWT52P43300A  
 Serial Number:        Not Designated

Specification: FCC Part 15, Subpart C

Antenna Polarization: Horizontal  
 Antenna: 3 meters distance

Center Frequency: 433.92  
 Detectors: Peak

14:42:59 JUN 15, 2008

ACTV DET: PEAK  
 MEAS DET: PEAK QP AVG  
 MKRΔ 1.7250 sec  
 .93 dB

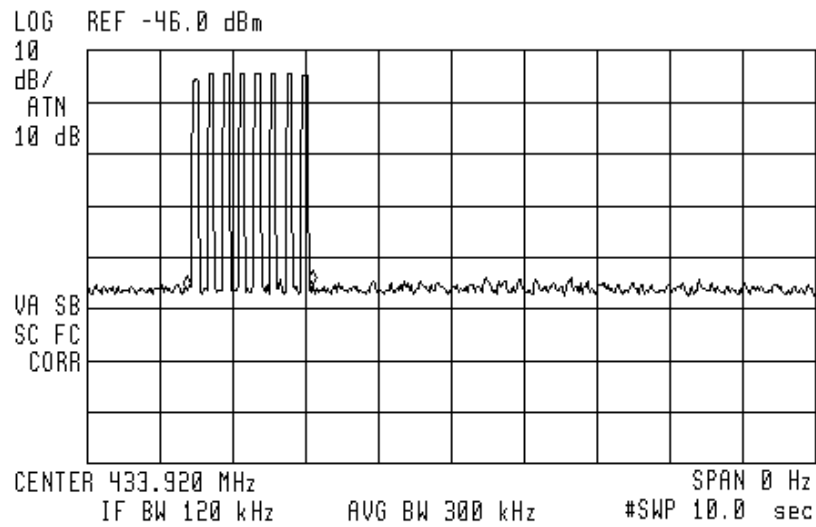


Figure 15. Transmitter Shut Down Result

**Test Instrumentation Used**

<b>Instrument</b>	<b>Manufacturer</b>	<b>Model</b>	<b>Serial Number</b>	<b>Calibration</b>	<b>Period</b>
EMI Receiver	HP	85422E	3411A00102	November 12, 2007	1 year
RF Section	HP	85420E	3427A00103	November 12, 2007	1 year
Antenna Bioconical	ARA	BCD 235/B	1041	March 28, 2008	1 year
Antenna Log Periodic	ARA	LPD-2010/A	1038	November 22, 2007	1 year
Antenna-Log Periodic	A.H.System	SAS-200/511	253	February 4, 2007	2 year
Antenna Mast	ARA	AAM-4A	1001	N/A	N/A
Turntable	ARA	ART-1001/4	1001	N/A	N/A
Mast & Table Controller	ARA	ACU-2/5	1001	N/A	N/A
Printer	HP	LaserJet 2200	JPKG19982	N/A	N/A



## 8. Occupied Bandwidth

### 8.1 Test Specification

F.C.C. Part 15, Subpart C: 15.231(c)

### 8.2 Test procedure

The transmitter unit operated with normal modulation. The spectrum analyzer was set to 120 kHz resolution BW and center frequency of the transmitter fundamental. The spectrum bandwidth of the transmitter unit was measured and recorded. The test was performed to measure the transmitter occupied bandwidth. The EUT was set up as shown in Figure 3, and its proper operation was checked. The transmitter occupied bandwidth was measured with the spectrum analyzer as frequency delta between reference points on modulation envelope.

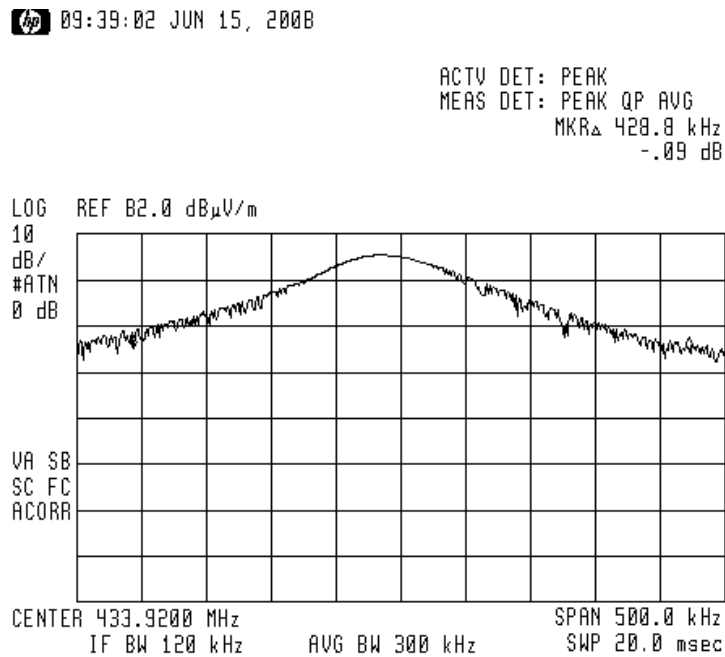


Figure 16. 433.92 Center Frequency

### 8.3 Test Data

E.U.T Description: 2-Button Panic Keyfob

Model: RWT52P43300A

Serial Number: Not Designated

Bandwidth Reading (MHz)	Specification (1) (MHz)	Margin (MHz)
0.428	< 1.08 MHz	-0.652

**Figure 17 Test Results**

JUDGEMENT: Passed by 0.652 MHz

TEST PERSONNEL:

Tester Signature: 

Date: 02.07.2008

Typed/Printed Name: A. Sharabi

(1) 0.25% of the E.U.T. fundamental frequency, Section 15.231(c).

#### 8.4 Test Equipment Used.

Instrument	Manufacturer	Model	Serial Number	Calibration	Period
EMI Receiver	HP	85422E	3411A00102	November 22, 2007	1 year
RF Section	HP	85420E	3427A00103	November 22, 2007	1 year
Antenna Log Periodic	ARA	LPD-2010/A	1038	November 30, 2007	1 year
Antenna Mast	ARA	AAM-4A	1001	N/A	N/A
Turntable	ARA	ART-1001/4	1001	N/A	N/A
Mast & Table Controller	ARA	ACU-2/5	1001	N/A	N/A
Printer	HP	LaserJet 2200	JPKG19982	N/A	N/A

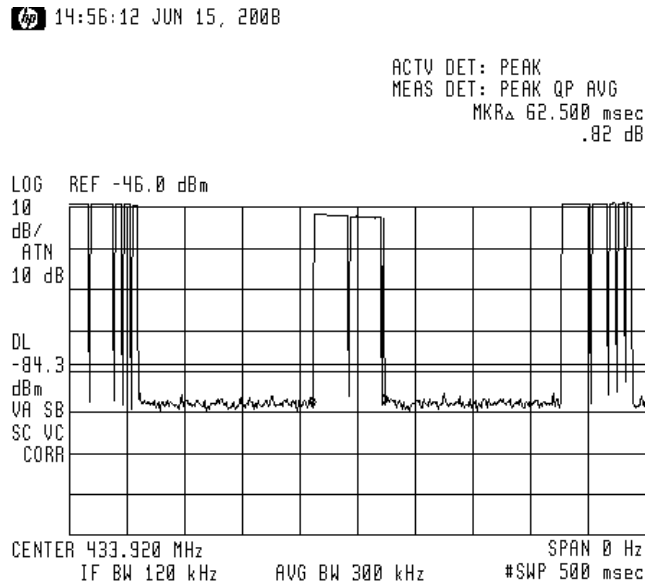
Figure 18 Test Equipment Used

## 9. APPENDIX A – Average Factor Designation

### Notes:

1. Transmission pulse duration (ANSIC63.4 section 13.1.4) – Declaration: 0.75msec
2. Transmission pulse period (ANSIC63.4 section 13.1.4) – Declaration: 1.5msec
3. Burst duration = 62.5 msec
4. Average Factor =  $20 \log [(Pulse\ duration/Pulse\ period) * (burst\ duration/100msec) * Num\ of\ burst\ within\ 100msec]$

**Average Factor Calculation =  $20 \log [(0.75/1.5)*(62.5/100)*1] = -10.1$**



**Figure 19 Transmission Burst Duration**

## APPENDIX A – Average Factor Designation (Cont'd)

14:57:24 JUN 15, 2008

ACTV DET: PEAK  
MEAS DET: PEAK QP AVG  
MKRΔ 213.75 msec  
.16 dB

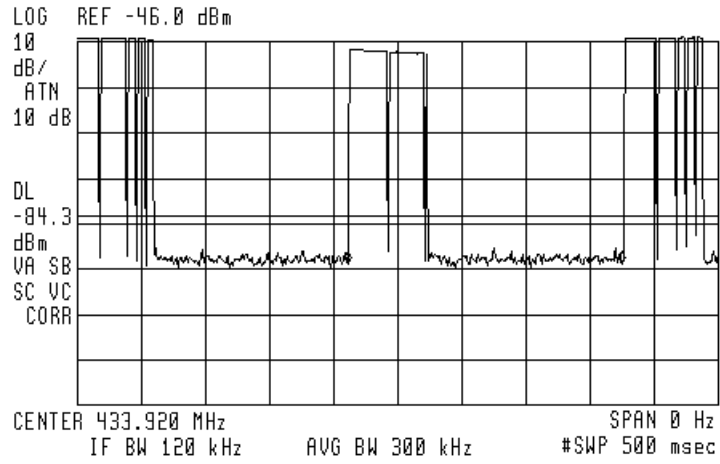


Figure 20 Burst Period

## 10. APPENDIX B - Comparison requirement FCC with Industry Canada

<b>EUT</b>	<b>FCC Specification</b>	<b>According FCC Standard</b>	<b>IC Standard</b>
2 Button Panic Keyfob	<b>Spurious Emissions Transmission Mode</b>	<b>FCC Part 15.231 (e)</b>	<b>RSS- 210 Section 2.6 Annex 1</b>
	<b>Maximum Transmitting Power</b>	<b>FCC Part 15.231 (b)</b>	<b>RSS- 210 Annex 1 A1.1.2, Section 2.6</b>
	<b>Periodic Operation Requirements</b>	<b>FCC Part 15.231 (a)(1-5)</b>	<b>RSS- 210 Section 2.6 Annex 1, A1.1.1</b>
	<b>Occupied Bandwidth</b>	<b>FCC Part 15.231 (c)</b>	<b>RSS- 210 Section 2.6 Annex 1 A1.1.3</b>

## 11. APPENDIX C - CORRECTION FACTORS

### 11.1 Correction factors for CABLE from EMI receiver to test antenna at 3 meter range.

FREQUENCY (MHz)	CORRECTION FACTOR (dB)	FREQUENCY (MHz)	CORRECTION FACTOR (dB)
10.0	0.3	1200.0	7.3
20.0	0.6	1400.0	7.8
30.0	0.8	1600.0	8.4
40.0	0.9	1800.0	9.1
50.0	1.1	2000.0	9.9
60.0	1.2	2300.0	11.2
70.0	1.3	2600.0	12.2
80.0	1.4	2900.0	13.0
90.0	1.6		
100.0	1.7		
150.0	2.0		
200.0	2.3		
250.0	2.7		
300.0	3.1		
350.0	3.4		
400.0	3.7		
450.0	4.0		
500.0	4.3		
600.0	4.7		
700.0	5.3		
800.0	5.9		
900.0	6.3		
1000.0	6.7		

**NOTES:**

1. The cable type is RG-214.
2. The overall length of the cable is 27 meters.
3. The above data is located in file 27MO3MO.CBL on the disk marked "Radiated Emission Tests EMI Receiver".

**11.2 Correction factors for**

**LOG PERIODIC ANTENNA**

**Type LPD 2010/A**

**at 3 and 10 meter ranges.**

**Distance of 3 meters**

<b>FREQUENCY (MHz)</b>	<b>AFE (dB/m)</b>
200.0	9.1
250.0	10.2
300.0	12.5
400.0	15.4
500.0	16.1
600.0	19.2
700.0	19.4
800.0	19.9
900.0	21.2
1000.0	23.5

**Distance of 10 meters**

<b>FREQUENCY (MHz)</b>	<b>AFE (dB/m)</b>
200.0	9.0
250.0	10.1
300.0	11.8
400.0	15.3
500.0	15.6
600.0	18.7
700.0	19.1
800.0	20.2
900.0	21.1
1000.0	23.2

**NOTES:**

1. Antenna serial number is 1038.
2. The above lists are located in file number 38M30.ANT for a 3 meter range, and file number 38M100.ANT for a 10 meter range.
3. The files mentioned above are located on the disk marked "Radiated Emission Test EMI Receiver".



**11.3 Correction factors for BICONICAL ANTENNA  
Type BCD-235/B,  
at 3 meter range**

<b>FREQUENCY (MHz)</b>	<b>AFE (dB/m)</b>
20.0	19.4
30.0	14.8
40.0	11.9
50.0	10.2
60.0	9.1
70.0	8.5
80.0	8.9
90.0	9.6
100.0	10.3
110.0	11.0
120.0	11.5
130.0	11.7
140.0	12.1
150.0	12.6
160.0	12.8
170.0	13.0
180.0	13.5
190.0	14.0
200.0	14.8
210.0	15.3
220.0	15.8
230.0	16.2
240.0	16.6
250.0	17.6
260.0	18.2
270.0	18.4
280.0	18.7
290.0	19.2
300.0	19.9
310	20.7
320	21.9
330	23.4
340	25.1
350	27.0

**NOTES:**

1. Antenna serial number is 1041.
2. The above list is located in file 19BC10M1.ANT on the disk marked "Radiated Emissions Tests EMI Receiver".