



Test Report

Product Name	Passive Keyless Entry System
Model No.	PKETR1
FCC ID.	EZSDEIPKETR1

Applicant	DEI Headquarters, Inc.
Address	One Viper Way, Vista CA 92081

Date of Receipt	May 25, 2012
Issued Date	June 13, 2012
Report No.	125441R-RFUSP04V01
Report Version	V1.0



The test results relate only to the samples tested.
 The test report shall not be reproduced except in full without the written approval of Quietek Corporation.
 This report must not be used to claim product endorsement by NVLAP any agency of the U.S. Government

Test Report Certification

Issued Date : June 13, 2012

Report No. : 095168R-RFUSP04V01



Product Name	Passive Keyless Entry System
Applicant	DEI Headquarters, Inc.
Address	One Viper Way, Vista CA 92081
Manufacturer	NUTEK CORPORATION
Model No.	PKETR1
FCC ID.	EZSDEIPKETR1
EUT Rated Voltage	DC 3V (Power by Battery)
EUT Test Voltage	DC 3V (Power by Battery)
Trade Name	DIRECTED
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C: 2010 ANSI C63.4: 2003
Test Result	Complied

Test results relate only to the samples tested.

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This report must not be used to claim product endorsement by NVLAP any agency of the U.S. Government

Documented By : Anita Chou
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Tested By : Vincent chu
(Engineer / Vincent Chu)

Approved By : [Signature]
(Manager / Vincent Lin)

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1. General Information

1.1. EUT Description

Product Name	Passive Keyless Entry System
Trade Name	DIRECTED
Model No.	PKETR1
FCC ID	EZSDEIPKETR1
Frequency Range	433.92MHz
Number of Channels	1
Type of Modulation	ASK
Antenna Type	Printed on PCB

Frequency of Each Channel:

Channel	Frequency
Channel 1:	433.92 MHz

Note:

1. The EUT is a Passive Keyless Entry System with a built-in 433.92 MHz transmitter.
2. These tests are conducted on a sample for the purpose of demonstrating compliance with Part 15 Subpart C Paragraph 15.231.
3. The radiation measurements are performed in X, Y, Z axis positioning. Only the worst case is shown in the report.

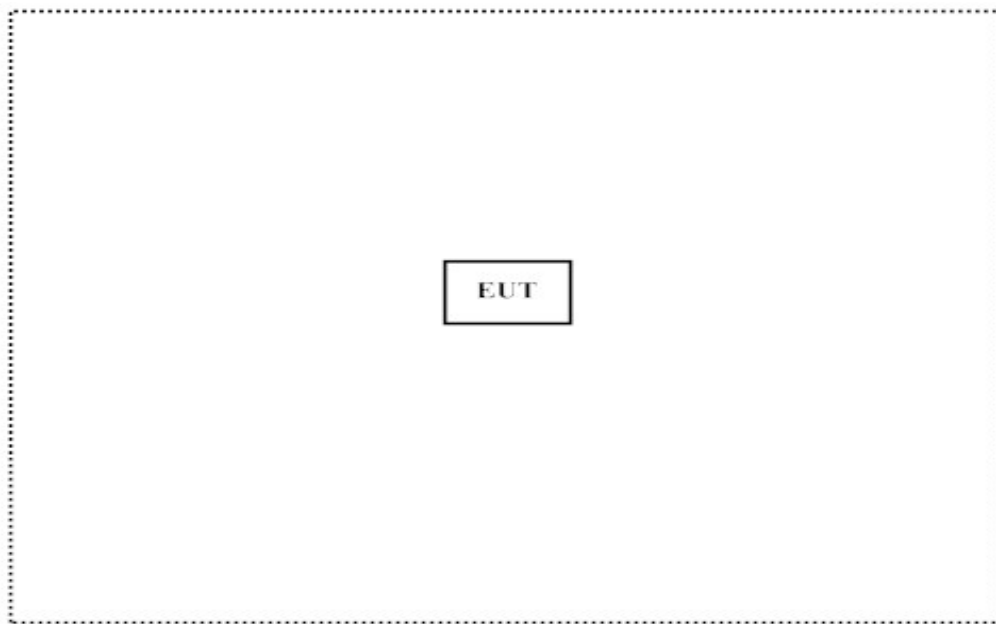
Test Mode	Mode 1: Transmit
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1.3. Tested System Details

The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product	Manufacturer	Model No.	Serial No.	FCC ID	Power Cord
N/A					

1.4. Configuration of tested System



1.5. EUT Exercise Software

- (1) Setup the EUT as shown in section 1.4.
- (2) Press and hold the button.
- (3) Start transmits continually.
- (4) Verify that the EUT works properly.

1.6. Test Facility

Ambient conditions in the laboratory:

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	20-35
Humidity (%RH)	25-75	50-65
Barometric pressure (mbar)	860-1060	950-1000

The related certificate for our laboratories about the test site and management system can be downloaded from Quietek Corporation's Web Site : <http://tw.quietek.com/modules/myalbum/>

The address and introduction of Quietek Corporation's laboratories can be founded in our Web site : <http://www.quietek.com/>

Site Description: File on
 Federal Communications Commission
 FCC Engineering Laboratory
 7435 Oakland Mills Road
 Columbia, MD 21046
 Registration Number: 92195

Accreditation on NVLAP
 NVLAP Lab Code: 200533-0

Site Name: Quietek Corporation
 Site Address: No.5-22, Ruishukeng,
 Linkou Dist. New Taipei City 24451,
 Taiwan, R.O.C.
 TEL: 886-2-8601-3788 / FAX : 886-2-8601-3789
 E-Mail : service@quietek.com

FCC Accreditation Number: TW1014

2. Conducted Emission

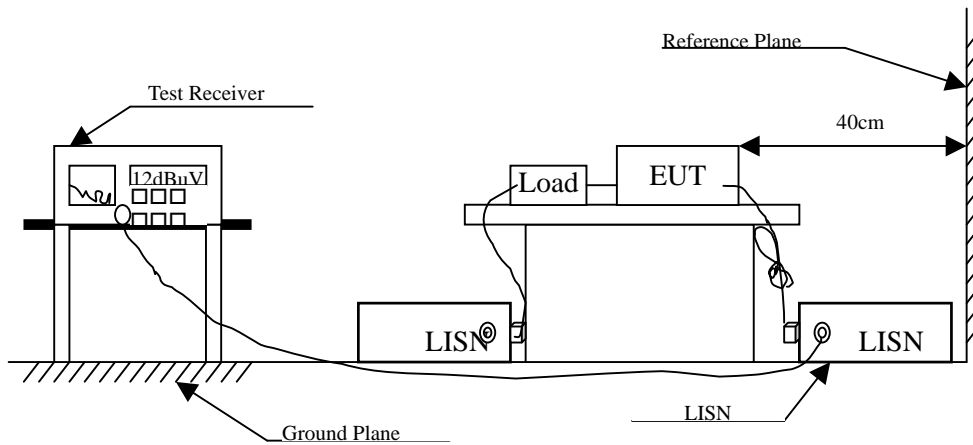
2.1. Test Equipment

	Equipment	Manufacturer	Model No. / Serial No.	Last Cal.	Remark
X	Test Receiver	R & S	ESCS 30 / 825442/018	Sep., 2011	
X	Artificial Mains Network	R & S	ENV4200 / 848411/10	Feb., 2012	Peripherals
X	LISN	R & S	ESH3-Z5 / 825562/002	Feb., 2012	EUT
	DC LISN	Schwarzbeck	8226 / 176	Mar, 2012	EUT
X	Pulse Limiter	R & S	ESH3-Z2 / 357.8810.52	Feb., 2012	
	No.1 Shielded Room				

Note:

1. All equipments are calibrated every one year.
2. The test instruments marked by “X” are used to measure the final test results.

2.2. Test Setup



2.3. Limits

FCC Part 15 Subpart C Paragraph 15.207 Limits (dBuV)		
Frequency MHz	QP	AV
0.15 - 0.50	66-56	56-46
0.50-5.0	56	46
5.0 - 30	60	50

Remarks : In the above table, the tighter limit applies at the band edges.

2.4. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2003 on conducted measurement.

Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

2.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.231

2.6. Uncertainty

± 2.26 dB

2.7. Test Result

Owing to the EUT use battery supply voltage, this test item is not performed.

3. Radiated Emission

3.1. Test Equipment

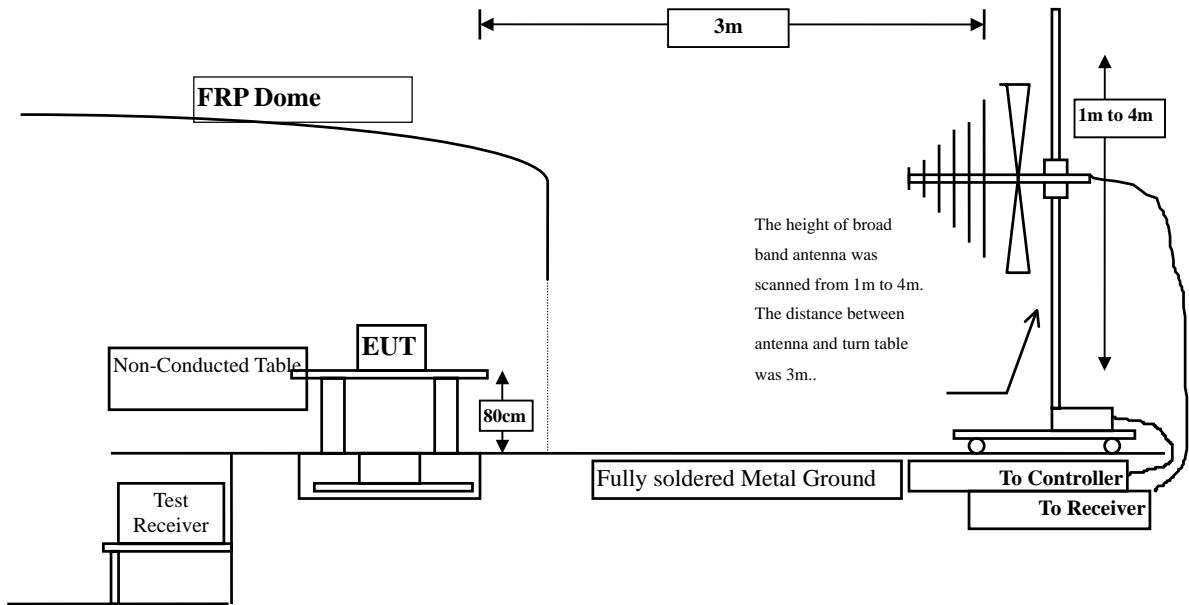
The following test equipment are used during the test:

Test Site	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
☒ Site # 3	X Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2011
	X Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2011
	Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2011
	X Pre-Amplifier	QTK	QTK-AMP-03 / 0003	May, 2012
	X Pre-Amplifier	QTK	AP-180C / CHM_0906076	Sep., 2011
	Pre-Amplifier	MITEQ	AMF-4D-180400-45-6P/ 925975	Mar, 2012
	X Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2012
	X Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2011
	X Coaxial Cable	Quietek	QTK-CABLE/ CAB5	Feb., 2012
	X Controller	Quietek	QTK-CONTROLLER/ CTRL3	N/A
	X Coaxial Switch	Anritsu	MP59B/6200265729	N/A

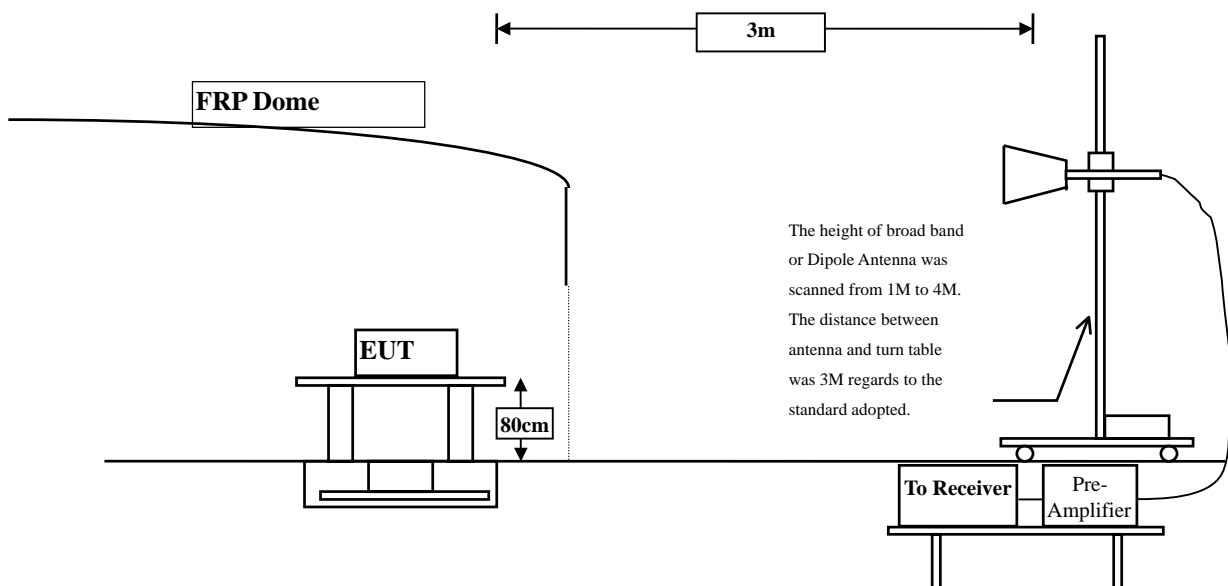
- Note:
1. All instruments are calibrated every one year.
 2. The test instruments marked by "X" are used to measure the final test results.

3.2. Test Setup

Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



3.3. Limits

➤ **FCC Part 15.231(b)** Fundamental and Harmonics Emission Limits

Fundamental Frequency MHz	Field Strength of Fundamental	Field Strength of Spurious Emission
40.66-40.70	2250	225
70-130	1250	125
130-174	1250-3750	125-375
174-260	3750	375
260-470	3750-12500	375-1250
above 470	12500	1250

- Remarks :
1. RF Voltage (dBuV) = 20 log RF Voltage (uV)
 2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
 3. The emission limit in this paragraph is based on measurement instrumentation employing an average detector.

➤ Spurious electric field strength limits

FCC Part 15 Subpart C Paragraph 15.209 Limits			
Frequency MHz	uV/m	dBuV/m	Measurement distance (meter)
0.009-0.490	2400/F(kHz)	See Remark ¹	300
0.490-1.705	24000/F(kHz)	See Remark ¹	30
1.705-30	30	29.5	30
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

- Remarks :
1. RF Voltage (dBuV) = 20 log RF Voltage (uV)
 2. In the Above Table, the tighter limit applies at the band edges.
 3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

3.4. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level.

The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4:2003 on radiated measurement.

On the field strength of fundamental and harmonics, the limits shown are based on measuring equipment employing a average detector function. As an alternative, compliance with the limits may be based on the use of measurement instrumentation with a CISPR quasi-peak detector.

On the field strength of spurious electric, on any frequency or frequencies below or equal to 1000 MHz, the limits shown are based on measuring equipment employing a quasi-peak detector function and on any frequency or frequencies above 1000 MHz the radiated limits shown are based upon the use of measurement instrumentation employing an average detector function.

When average radiated emission measurement are included emission measurement below 1000 MHz, there also is a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit.

The bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

3.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.231

3.6. Uncertainty

± 3.8 dB below 1GHz

± 3.9 dB above 1GHz

3.7. Test Result

Product	Passive Keyless Entry System		
Test Item	Fundamental Radiated Emission		
Test Mode	Mode 1: Transmit		
Date of Test	2012/06/08	Test Site	No.3 OATS

Fundamental Power (X-Line Peak Detector)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
------------------	-------------------------	--------------------------	--------------------------------	--------------	-----------------

Horizontal

433.900	-0.846	83.990	83.144	-17.676	100.820
---------	--------	--------	--------	---------	---------

Vertical

433.900	-1.776	73.720	71.944	-28.876	100.820
---------	--------	--------	--------	---------	---------

Note:

1. Correct factor = Antenna Factor + Cable Loss – Pre-amplifier Gain
2. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
3. $Limit = 20dB + (20\log(41.667(433.9) - 7083.333))$

Average Detector:

Frequency MHz	Peak Measurement dBuV/m	Duty Cycle Correct Factor dB	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
------------------	-------------------------------	------------------------------------	--------------------------------	--------------	-----------------

Horizontal

433.900	83.144	-14.049	69.095	-11.725	80.820
---------	--------	---------	--------	---------	--------

Vertical

433.900	71.944	-14.049	57.895	-22.925	80.820
---------	--------	---------	--------	---------	--------

Note:

1. $AVG\ Measurement = Peak\ Measurement - Duty\ Cycle\ Correct\ Factor$
2. The Duty Cycle is refer to section 6.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. $Limit = 20\log(41.667(433.9) - 7083.333)$

Product	Passive Keyless Entry System		
Test Item	Fundamental Radiated Emission		
Test Mode	Mode 1: Transmit		
Date of Test	2012/06/08	Test Site	No.3 OATS

Fundamental Power (Y-Line Peak Detector)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
------------------	-------------------------	--------------------------	--------------------------------	--------------	-----------------

Horizontal

433.900	-0.846	77.190	76.344	-24.476	100.820
---------	--------	--------	--------	---------	---------

Vertical

433.900	-1.776	83.820	82.044	-18.776	100.820
---------	--------	--------	--------	---------	---------

Note:

1. Correct factor = Antenna Factor + Cable Loss – Pre-amplifier Gain
2. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
3. Limit=20dB+(20log(41.667(433.9)-7083.333))

Average Detector:

Frequency MHz	Peak Measurement dBuV/m	Duty Cycle Correct Factor dB	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
------------------	-------------------------------	------------------------------------	--------------------------------	--------------	-----------------

Horizontal

433.900	76.344	-14.049	62.295	-18.525	80.820
---------	--------	---------	--------	---------	--------

Vertical

433.900	82.044	-14.049	67.995	-12.825	80.820
---------	--------	---------	--------	---------	--------

Note:

1. AVG Measurement=Peak Measurement - Duty Cycle Correct Factor
2. The Duty Cycle is refer to section 6.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. Limit=20log(41.667(433.9)-7083.333)

Product	Passive Keyless Entry System		
Test Item	Fundamental Radiated Emission		
Test Mode	Mode 1: Transmit		
Date of Test	2012/06/08	Test Site	No.3 OATS

Fundamental Power (Z-Line Peak Detector)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
------------------	-------------------------	--------------------------	--------------------------------	--------------	-----------------

Horizontal

433.900	-0.846	78.790	77.944	-22.876	100.820
---------	--------	--------	--------	---------	---------

Vertical

433.900	-1.776	84.620	82.844	-17.976	100.820
---------	--------	--------	--------	---------	---------

Note:

1. Correct factor = Antenna Factor + Cable Loss – Pre-amplifier Gain
2. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
3. $Limit = 20dB + (20\log(41.667(433.9) - 7083.333))$

Average Detector:

Frequency MHz	Peak Measurement dBuV/m	Duty Cycle Correct Factor dB	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
------------------	-------------------------------	------------------------------------	--------------------------------	--------------	-----------------

Horizontal

433.900	77.944	-14.049	63.895	-16.925	80.820
---------	--------	---------	--------	---------	--------

Vertical

433.900	82.844	-14.049	68.795	-12.025	80.820
---------	--------	---------	--------	---------	--------

Note:

1. $AVG\ Measurement = Peak\ Measurement - Duty\ Cycle\ Correct\ Factor$
2. The Duty Cycle is refer to section 6.
3. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.
4. $Limit = 20\log(41.667(433.9) - 7083.333)$

Product	Passive Keyless Entry System		
Test Item	Harmonic Radiated Emission (X-Line)		
Test Mode	Mode 1: Transmit		
Date of Test	2012/06/11	Test Site	No.3 OATS

Harmonic Radiated Emission (X-Line)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Quasi-Peak Limit dBuV/m
------------------	-------------------------	--------------------------	--------------------------------	--------------	-------------------------------

Horizontal
Quasi-Peak

867.760	5.434	45.236	50.670	-10.150	60.820
---------	-------	--------	--------	---------	--------

Vertical
Quasi-Peak

867.760	0.641	42.238	42.879	-17.941	60.820
---------	-------	--------	--------	---------	--------

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. Limit=(20log(41.667(433.9)-7083.333))-20dB

Product	Passive Keyless Entry System		
Test Item	Harmonic Radiated Emission(X-Line)		
Test Mode	Mode 1: Transmit		
Date of Test	2012/06/06	Test Site	No.3 OATS

Frequency	Correct	Reading	Measurement	Margin	Peak	Average
MHz	Factor	Level	Level	dB	Limit	Limit
	dB	dBuV	dBuV/m		dBuV/m	dBuV/m

Harmonic Radiated Emission

Horizontal

Peak

1301.700	-4.794	37.153	32.359	-41.641	74.000	54.000
1735.600	-3.976	38.256	34.280	-39.720	74.000	54.000
2169.500	-2.389	37.297	34.908	-39.092	74.000	54.000
2603.400	-1.039	36.623	35.584	-38.416	74.000	54.000
3037.300	-1.439	38.010	36.571	-37.429	74.000	54.000
3471.200	-0.946	39.078	38.132	-35.868	74.000	54.000
3905.100	0.463	38.500	38.963	-35.037	74.000	54.000
4339.000	1.638	36.619	38.256	-35.744	74.000	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	Passive Keyless Entry System		
Test Item	Harmonic Radiated Emission(X-Line)		
Test Mode	Mode 1: Transmit		
Date of Test	2012/06/06	Test Site	No.3 OATS

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Peak Limit dBuV/m	Average Limit dBuV/m
------------------	-------------------------	--------------------------	--------------------------------	--------------	-------------------------	----------------------------

Harmonic Radiated Emission

Vertical

Peak

1301.700	-4.142	37.523	33.380	-40.620	74.000	54.000
1735.600	-2.068	38.716	36.649	-37.351	74.000	54.000
2169.500	-2.090	36.838	34.747	-39.253	74.000	54.000
2603.400	-1.299	36.257	34.958	-39.042	74.000	54.000
3037.300	-1.353	38.029	36.676	-37.324	74.000	54.000
3471.200	-0.297	38.525	38.227	-35.773	74.000	54.000
3905.100	1.579	37.309	38.888	-35.112	74.000	54.000
4339.000	3.429	36.480	39.908	-34.092	74.000	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product	Passive Keyless Entry System		
Test Item	General Radiated Emission(X-Line)		
Test Mode	Mode 1: Transmit		
Date of Test	2012/06/11	Test Site	No.3 OATS

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Quasi-Peak					
105.660	-6.673	24.923	18.250	-25.250	43.500
462.620	1.172	24.355	25.527	-20.473	46.000
544.100	3.512	25.431	28.943	-17.057	46.000
644.980	1.552	25.749	27.301	-18.699	46.000
745.860	3.308	25.539	28.847	-17.153	46.000
952.110	6.568	23.367	29.934	-16.066	46.000
Vertical					
Quasi-Peak					
99.840	-0.021	24.826	24.805	-18.695	43.500
515.000	-1.090	24.551	23.461	-22.539	46.000
544.100	-0.688	23.554	22.866	-23.134	46.000
613.940	-1.687	23.593	21.906	-24.094	46.000
689.600	2.538	23.092	25.630	-20.370	46.000
951.820	6.625	19.367	25.992	-20.008	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

4. Transmit time

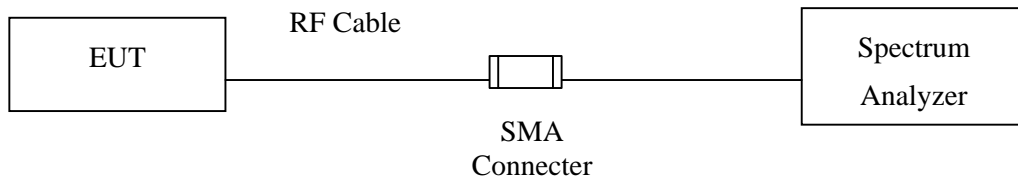
4.1. Test Equipment

The following test equipment are used during the test:

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2012
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2012
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2012

Note: 1. All equipments are calibrated every one year.
 2. The test instruments marked by "X" are used to measure the final test results.

4.2. Test Setup



4.3. Limits

A manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 seconds of being released.

4.4. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.231

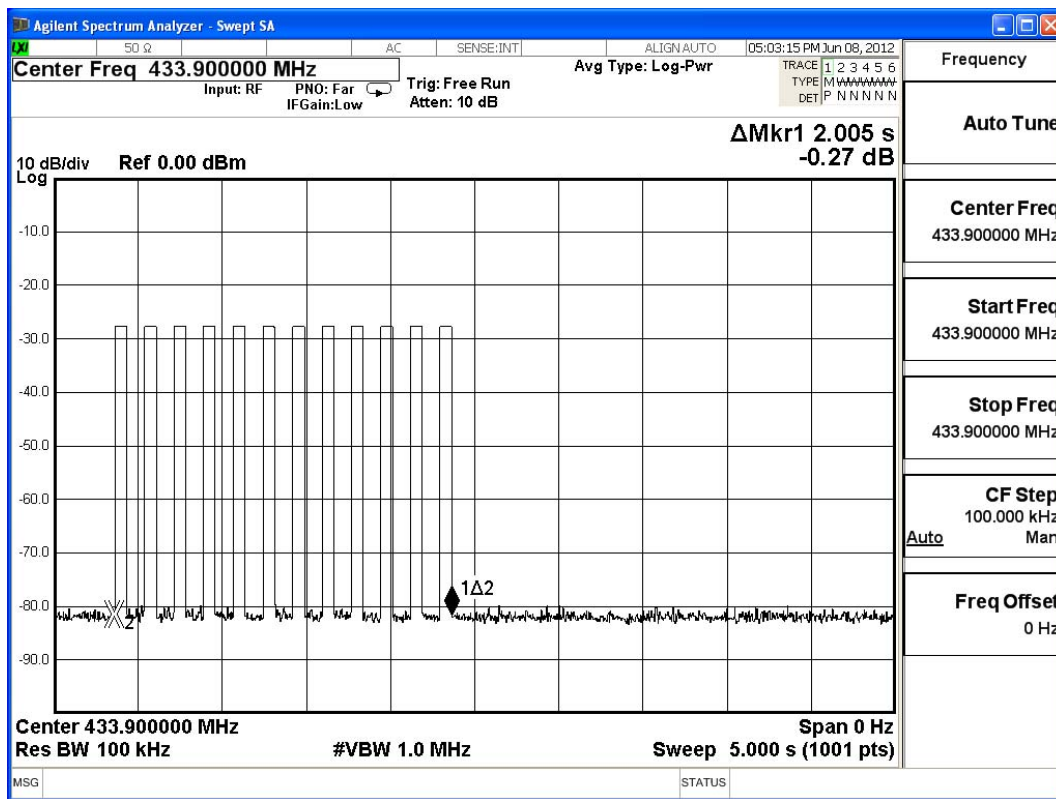
4.5. Uncertainty

± 25ms

4.6. Test Result

Product	Passive Keyless Entry System		
Test Item	Transmit time		
Test Mode	Mode 1: Transmit		
Date of Test	2012/06/08	Test Site	No.3 OATS

Channel No.	Frequency (MHz)	Measurement Value (Sec)	Limit (Sec)	Result
1	433.9	2.005	< 5	Pass



5. Occupied Bandwidth

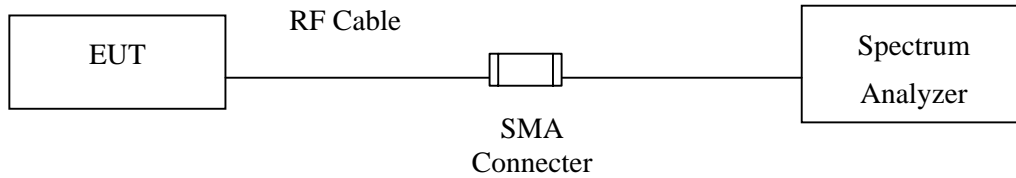
5.1. Test Equipment

The following test equipment are used during the test:

Equipment	Manufacturer	Model No./Serial No.	Last Cal.
Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2012
Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2012
X Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2012

Note: 1. All equipments are calibrated every one year.
 2. The test instruments marked by “X” are used to measure the final test results.

5.2. Test Setup



5.3. Limits

The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70MHz and below 900MHz. For devices operating above 900MHz, the emission shall be no wider than 0.5% of the center frequency. Bandwidth is determined at the points 20 dB down from the modulated carrier

5.4. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.231

5.5. Uncertainty

± 150Hz

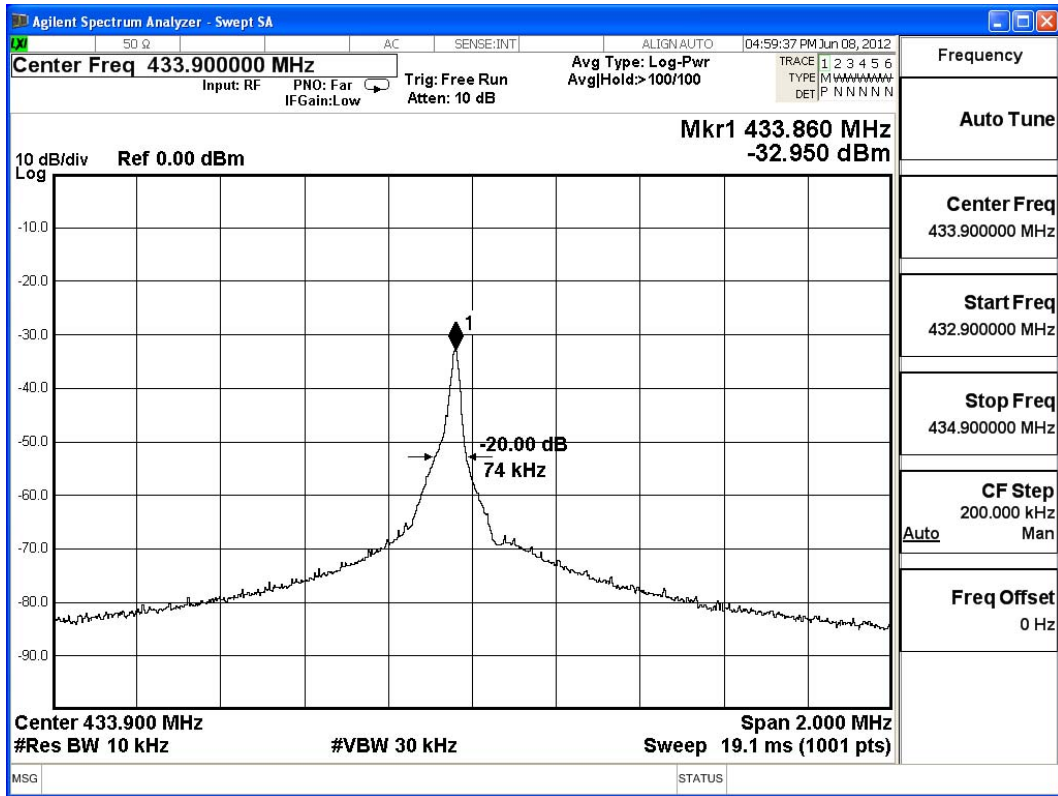
5.6. Test Result

Product	Passive Keyless Entry System		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: Transmit		
Date of Test	2012/06/08	Test Site	No.3 OATS

Channel No.	Frequency (MHz)	Measurement Value (MHz)	Limit (MHz)	Result
1	433.90	0.074	1.08475	Pass

Note: Limit = 433.90MHz * 0.25%= 1.08475MHz

Figure Channel 1:



6. Duty Cycle

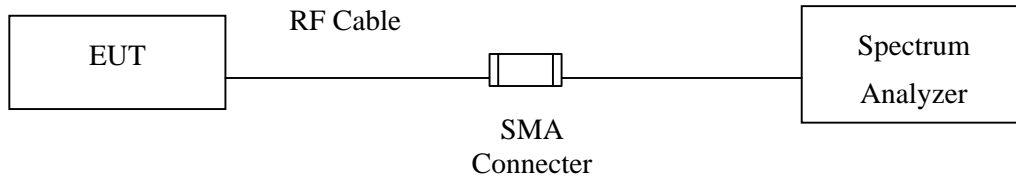
6.1. Test Equipment

The following test equipment are used during the test:

Equipment	Manufacturer	Model No./Serial No.	Last Cal.
Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2012
Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2012
X Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2012

Note: 1. All equipments are calibrated every one year.
 2. The test instruments marked by "X" are used to measure the final test results.

6.2. Test Setup



6.3. Test Specification

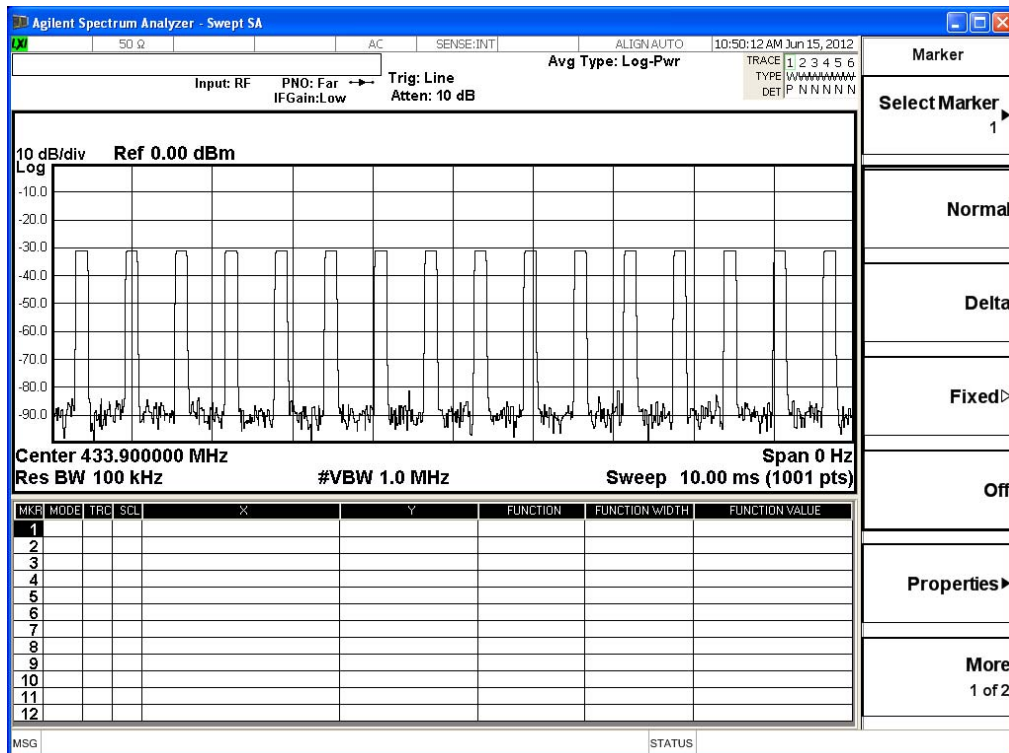
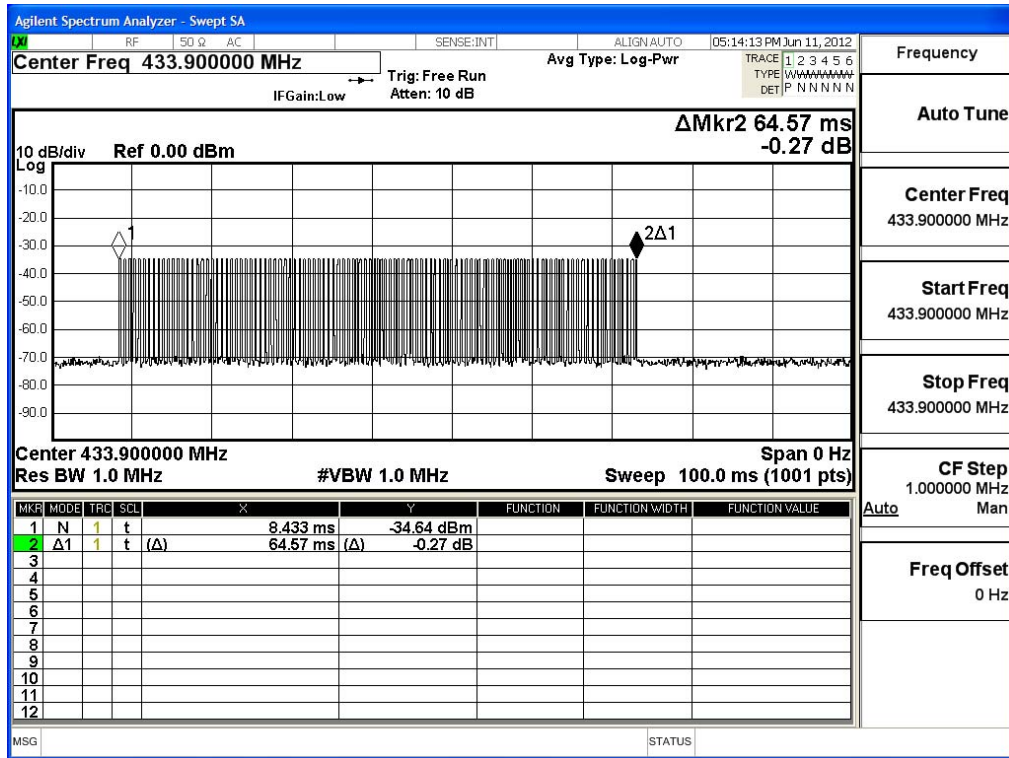
According to FCC Part 15 Subpart C Paragraph 15.231

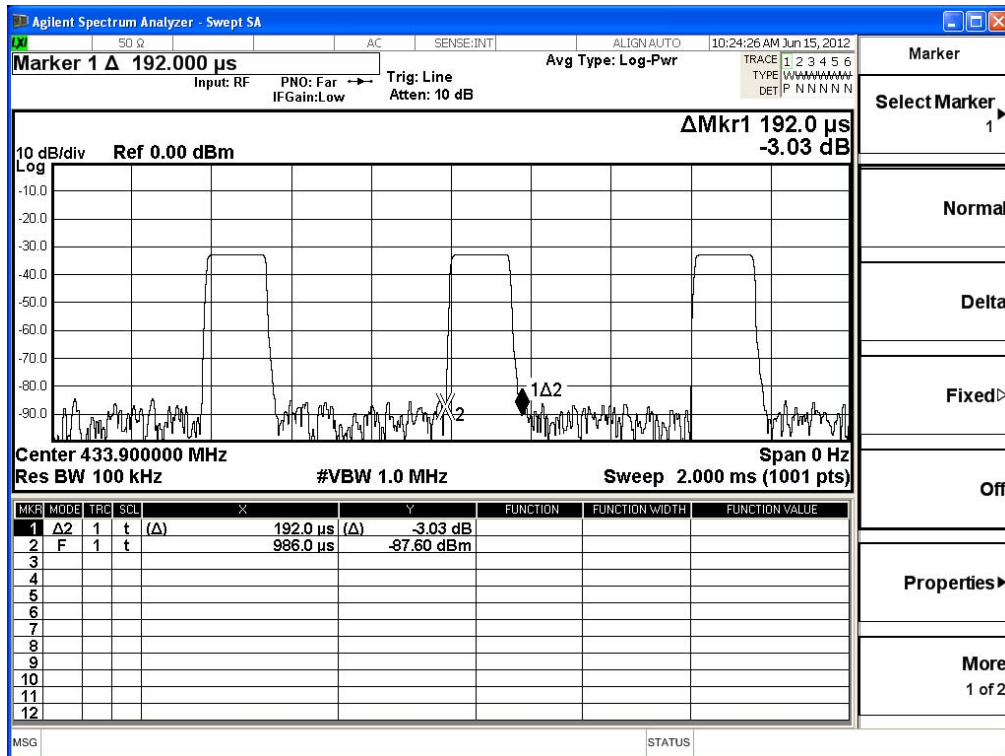
6.4. Uncertainty

± 25ms

6.5. Test Result

Product	Passive Keyless Entry System		
Test Item	Duty Cycle		
Test Mode	Mode 1: Transmit		
Date of Test	2012/06/11	Test Site	No.3 OATS





1 pulse = 192us
 16 pulses of 10 ms = 192us * 16 = 3.072ms
 3.072ms * (64.57ms/10ms) = 19.84ms
 Duty Cycle = 19.84msec / 100msec = 0.1984
 Duty Cycle correction factor = 20 LOG 0.1984 = -14.049

Duty Cycle correction factor	-14.049	dB
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