# FCC Test Report

| | | |
|---|---|---|
| Product Name | ： | SMART KEY Key FOB |
| Model No. | ： | CA00-1TX001TG0 |
| FCC ID. | ： | 2ABPMCA00-1TX001TG0 |

| | | |
|---|---|---|
| Applicant | ： | Whetron electronics Co., Ltd. |
| Address | ： | No.16, Singye Rd., Ta Fa Ind., Daliao Dist., Kaohsiung City 831, Taiwan (R.O.C.) |

| | | |
|---|---|---|
| Date of Receipt | ： | 2014/12/24 |
| Issued Date | ： | 2015/01/16 |
| Report No. | ： | 14C0596R-RFUSP14V00 |
| Report Version | ： | V1.0 |

ilac-MRA
TAF
Testing Laboratory
3024

# Test Report Certification

Issued Date : 2015/01/16
Report No. : 14C0596R-RFUSP14V00

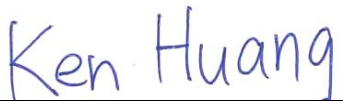
QuieTek

| | | |
|---|---|---|
| Product Name | : | SMART KEY Key FOB |
| Applicant | : | Whetron electronics Co., Ltd. |
| Address | : | No.16, Singye Rd., Ta Fa Ind., Daliao Dist., Kaohsiung City 831, Taiwan (R.O.C.) |
| Manufacturer | : | Whetron electronics Co., Ltd. |
| Model No. | : | CA00-1TX001TG0 |
| FCC ID. | : | 2ABPMCA00-1TX001TG0 |
| EUT Voltage | : | DC 3V (Power by Battery) |
| Applicable Standard | : | FCC 15 Subpart C Section 15.231(b): 2012 |
| Test Result | : | Complied |

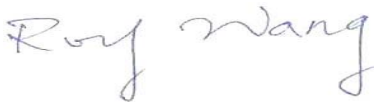
The test results relate only to the samples tested.
The test report shall not be reproduced except in full without the written approval of QuieTek Corporation.
This report must not be used to claim product endorsement by NVLAP any agency of the U.S. Government

Documented By : 

( Demi Chang / Engineering Adm. Specialist )

Reviewed By : 

( Ken Huang / Assistant Engineer )

Approved By : 

( Roy Wang / Director)

**Laboratory Information**

We, **QuieTek Corporation**, are an independent RF consultancy that was established the whole facility in our laboratories. The test facility has been accredited/accepted (audited or listed) by the following related bodies in compliance with ISO 17025 specified testing scopes:

| | | |
|---|---|---|
| **Taiwan R.O.C.** | **:** | **TAF, Accreditation Number: 3024**<br>**NCC, Certificate No : NCC-RCB-07** |
| **USA** | **:** | **FCC, Registration Number: 365520** |
| **Canada** | **:** | **IC, Submission No: 150981** |

The related certificate for our laboratories about the test site and management system can be downloaded from QuieTek Corporation's Web Site:http://www.quietek.com/chinese/about/certificates.aspx?bval=5
The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site : http://www.quietek.com/
If you have any comments, Please don't hesitate to contact us. Our contact information is as below:

**HsinChu Testing Laboratory:**
No.75-2, 3rd Lin, Wangye Keng, Yonghxing Tsuen, Qionglin Shiang, Hsinchu County 307, Taiwan, R.O.C.
TEL:+886-3-592-8858 / FAX:+886-3-592-8859 E-Mail : service@quietek.com

**LinKou Testing Laboratory:**
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

# TABLE OF CONTENTS

# 1. General Information

## 1.1. EUT Description

| | |
|---|---|
| Product Name | SMART KEY Key FOB |
| Model No. | CA00-1TX001TG0 |
| Frequency Range/Channel Number | 315 MHz / 1 Channel |
| Antenna Gain | 0dBi |
| Type of Modulation | ASK |
| Antenna Type | Soldered on PCB |

| Working Frequency of Each Channel | |
|---|---|
| Channel | Frequency |
| 01 | 315MHz |

Note:

1. This device is a SMART KEY Key FOB included a 315MHz transmitter and receiver function.
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.

## 1.2. Test Mode

QuieTek verified the construction and function in typical operation. All the test modes are performed in normal operation and are defined as:

| Pre-Test Mode | |
|---|---|
| TX | Mode 1: Transmit_Remote_Power by Battery |
| Final Test Mode | |
| TX | Mode 1: Transmit_Remote_Power by Battery |

| Emission | |
|---|---|
| Performed Item | |
| Conducted Emission | No |
| Radiated Emission | Yes |
| Occupied Bandwidth | Yes |
| Duty cycle | Yes |
| Transmitter time | Yes |

## 1.3. Tested System Details

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

N/A

## 1.4. Configuration of tested System

| Connection Diagram |
|---|
|   |

| Signal Cable Type | | Signal cable Description |
|---|---|---|
| A | USB Cable | Shielded, 1.8m |

## 1.5. EUT Exercise Software

| | |
|---|---|
| 1 | Setup the EUT as shown in section 1.4. |
| 2 | Turn on the EUT power. |
| 3 | The RF signal's status will continue transmit through EUT. |
| 4 | Repeat the above procedure. |

## 1.6. Test Facility

Ambient conditions in the laboratory:

| Items | Test Item | Required (IEC 68-1) | Actual |
|---|---|---|---|
| Temperature (°C) | FCC PART 15 C 15.231 Radiated Emission | 15 - 35 | 25 |
| Humidity (%RH) | | 25 - 75 | 50 |
| Barometric pressure (mbar) | | 860 - 1060 | 950-1000 |
| Temperature (°C) | FCC PART 15 C 15.231 Occupied Bandwidth | 15 - 35 | 25 |
| Humidity (%RH) | | 25 - 75 | 50 |
| Barometric pressure (mbar) | | 860 - 1060 | 950-1000 |
| Temperature (°C) | FCC PART 15 C 15.231 Duty Cycle | 15 - 35 | 25 |
| Humidity (%RH) | | 25 - 75 | 50 |
| Barometric pressure (mbar) | | 860 - 1060 | 950-1000 |
| Temperature (°C) | FCC PART 15 C 15.231 Transmitter Time | 15 - 35 | 25 |
| Humidity (%RH) | | 25 - 75 | 50 |
| Barometric pressure (mbar) | | 860 - 1060 | 950-1000 |

## 2. Radiated Emission

### 2.1. Test Equipment

The following test equipments are used during the test:

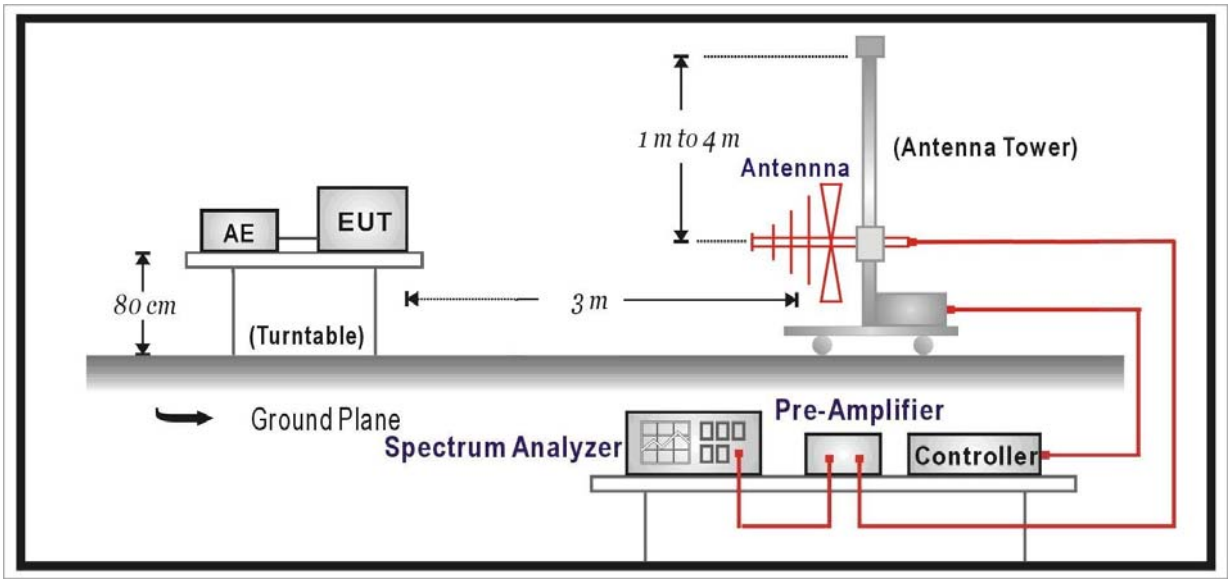
Radiated Emission / CB1

| Instrument | Manufacturer | Model No. | Serial No | Next Cal. Date |
|---|---|---|---|---|
| Bilog Antenna | SCHAFFNER | CBL6112B | 2895(CB1) | 2015/08/14 |
| Double Ridged Guide Horn Antenna | Schwarzback | BBHA 9120 | D743 | 2015/02/12 |
| Pre-Amplifier | Quietek | AMF-4D. | 888003 | 2015/06/02 |
| Pre-Amplifier | QuieTek | AP-025C | CHM-0706049 | 2015/02/06 |
| Spectrum Analyzer | Agilent | E4440A | MY46187335 | 2016/01/07 |
| k Type Cable | Huber Suhner | Sucoflex 102 | 25623/2 | 2015/02/10 |

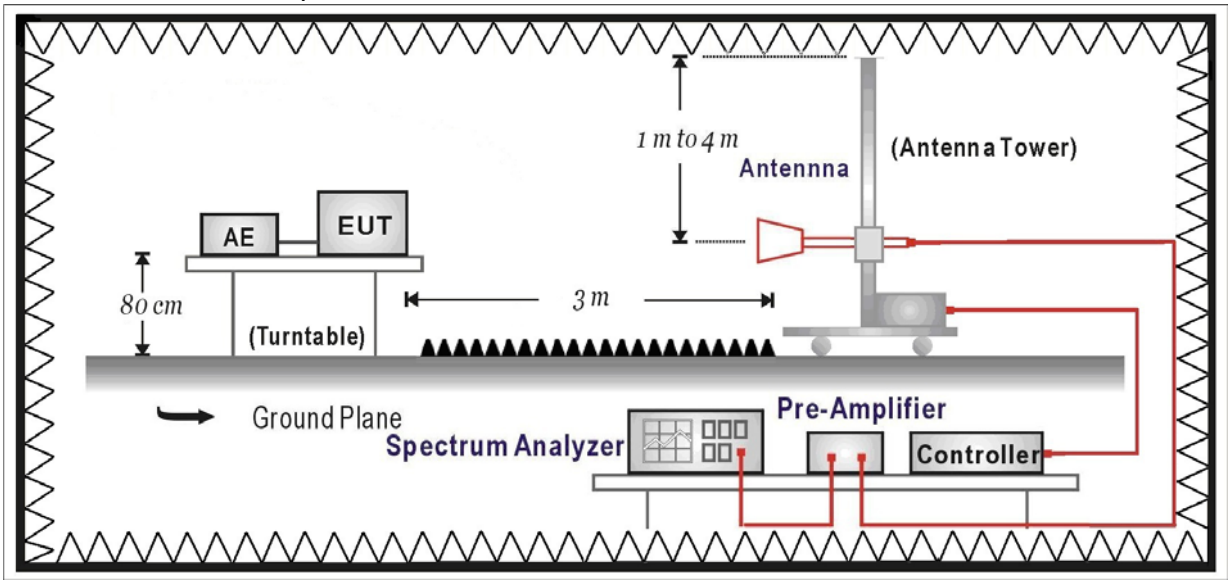
Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

## 2.2. Test Setup

Under 1GHz Test Setup:




Above 1GHz Test Setup:



## 2.3. Limits

➢ Fundamental and Harmonics Emission Limits

| FCC Part 15 Subpart C Paragraph 15.231(b) Limits | | | | |
|---|---|---|---|---|
| Fundamental Frequency MHz | Field Strength of Fundamental | | Field Strength of Harmonics | |
| | uV/m | dBuV/m | uV/m | dBuV/m |
| 40.66-40.70 | 2250 | 67.04 | 225 | 47.04 |
| 70-130 | 1250 | 61.94 | 125 | 41.94 |
| 130-174 | 1250-3750 | 61.94-71.48 | 125-375 | 41.94-51.48 |
| 174-260 | 3750 | 71.48 | 375 | 51.48 |
| 260-470 | 3750-12500 | 71.48-81.94 | 375-1250 | 51.48-61.94 |
| above 470 | 12500 | 81.94 | 1250 | 61.94 |

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.

## 2.4. 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 EUT was positioned such that the distance from antenna to the EUT was 3 meters.

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

Both horizontal and vertical polarizations 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: 2009 on radiated measurement.

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

Radiated emission measurements below 1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB beamwidth of the antenna.

The worst radiated emission is measured on the Final Measurement.

The frequency range from 30MHz to 10th harminics is checked.

## 2.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.231(b): 2012

## 2.6. Uncertainty

± 3.8 dB below 1GHz

± 3.9 dB above 1GHz

## 2.7. Test Result

| | | | |
|---|---|---|---|
| Product | SMART KEY Key FOB | | |
| Test Item | Fundamental Radiated Emission | | |
| Test Mode | Mode 1: Transmit_Remote_Power by Battery | | |
| Date of Test | 2015/01/06 | Test Site | CB1 |

| Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Peak Measurement Level (dBuV/m) | Average Measurement Level (dBuV/m) | Average Limit (dBuV/m) |
|---|---|---|---|---|---|
| **Horizontal** | | | | | |
| 315.000 (X-axis) | 13.113 | 34.360 | 47.472 | 40.594 | 75.623 |
| 315.000 (Y-axis) | 13.113 | 38.970 | 52.082 | 45.204 | 75.623 |
| 315.000 (Z-axis) | 13.113 | 43.520 | 56.632 | 49.754 | 75.623 |
| **Vertical** | | | | | |
| 315.000 (X-axis) | 13.113 | 43.980 | 57.092 | 50.214 | 75.623 |
| 315.000 (Y-axis) | 13.113 | 43.320 | 56.432 | 49.554 | 75.623 |
| 315.000 (Z-axis) | 13.113 | 28.640 | 41.752 | 34.874 | 75.623 |

Note1:

Peak Measurement Level = Reading Level + Correct Factor

Average Measurement Level = Peak Measurement Level + 20Log (Duty Cycle)

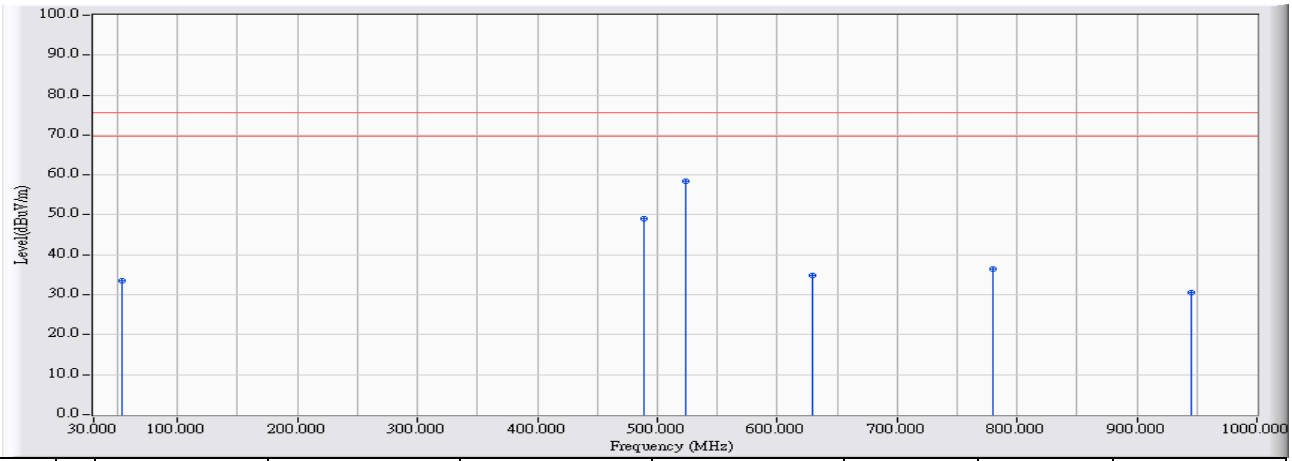
Duty Cycle(Only Ton)= Ton/ Ton+off=(53.4ms/94.2ms)=0.567

Duty Cycle=(Ton/(Ton+Toff))* Duty Cycle(Only Ton) =(80ms/100ms)*0.567=0.453

20*Log(Duty Cycle) = -6.878

**30MHz-1GHz Spurious :**

| | |
|---|---|
| **Site : CB1** | **Time : 2015/01/05 - 16:14** |
| **Limit : FCC_SpartC_15.231(B)_H_315MHz_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_30-1G-2_1011 - HORIZONTAL** | **Power : DC 3V** |
| **EUT : SMART KEY Key FOB** | **Note : Axis- X** |

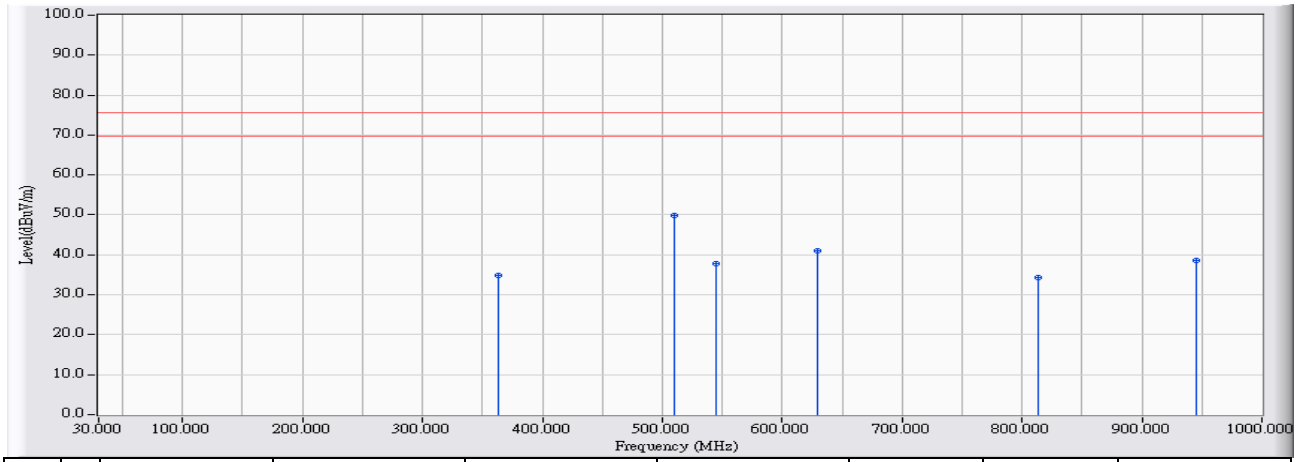



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 53.488 | 6.232 | 27.271 | 33.503 | -42.120 | 75.623 | QUASIPEAK |
| 2 | | 488.764 | 16.954 | 32.197 | 49.152 | -26.471 | 75.623 | QUASIPEAK |
| 3 | * | 523.246 | 17.253 | 41.143 | 58.396 | -17.227 | 75.623 | QUASIPEAK |
| 4 | | 629.691 | 17.635 | 17.152 | 34.787 | -40.836 | 75.623 | QUASIPEAK |
| 5 | | 780.113 | 18.971 | 17.556 | 36.527 | -39.096 | 75.623 | QUASIPEAK |
| 6 | | 945.028 | 19.840 | 10.613 | 30.453 | -45.170 | 75.623 | QUASIPEAK |

Note:

1. All Readings below 1GHz are QUASIPEAK, above are performed with QUASIPEAK measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

| | |
|---|---|
| **Site : CB1** | **Time : 2015/01/05 - 16:20** |
| **Limit : FCC_SpartC_15.231(B)_H_315MHz_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_30-1G-2_1011 - VERTICAL** | **Power : DC 3V** |
| **EUT : SMART KEY Key FOB** | **Note : Axis- X** |



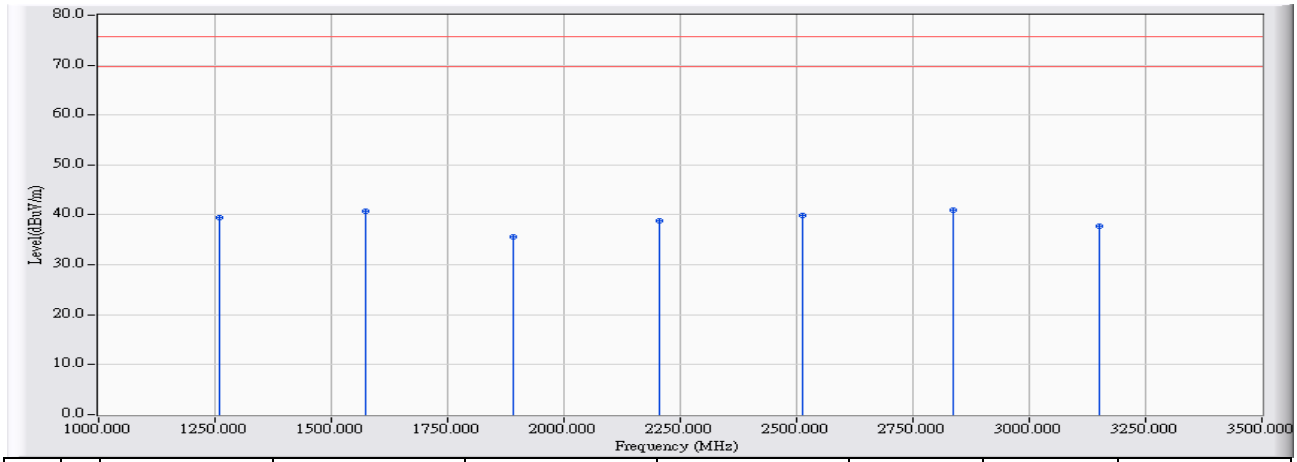

| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 362.828 | 14.261 | 20.622 | 34.883 | -40.740 | 75.623 | QUASIPEAK |
| 2 | * | 510.252 | 17.214 | 32.680 | 49.894 | -25.729 | 75.623 | QUASIPEAK |
| 3 | | 544.235 | 17.315 | 20.489 | 37.805 | -37.818 | 75.623 | QUASIPEAK |
| 4 | | 629.691 | 17.635 | 23.414 | 41.049 | -34.574 | 75.623 | QUASIPEAK |
| 5 | | 813.096 | 19.248 | 15.185 | 34.433 | -41.190 | 75.623 | QUASIPEAK |
| 6 | | 945.028 | 19.840 | 18.646 | 38.486 | -37.137 | 75.623 | QUASIPEAK |

Note:

1. All Readings below 1GHz are QUASIPEAK, above are performed with QUASIPEAK measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

**Above 1GHz Spurious:**

| | |
|---|---|
| **Site : CB1** | **Time : 2015/01/05 - 16:28** |
| **Limit : FCC_SpartC_15.231(B)_H_315MHz_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL** | **Power : DC 3V (Power by Battery)** |
| **EUT : SMART KEY Key FOB** | **Note : Axis- X** |

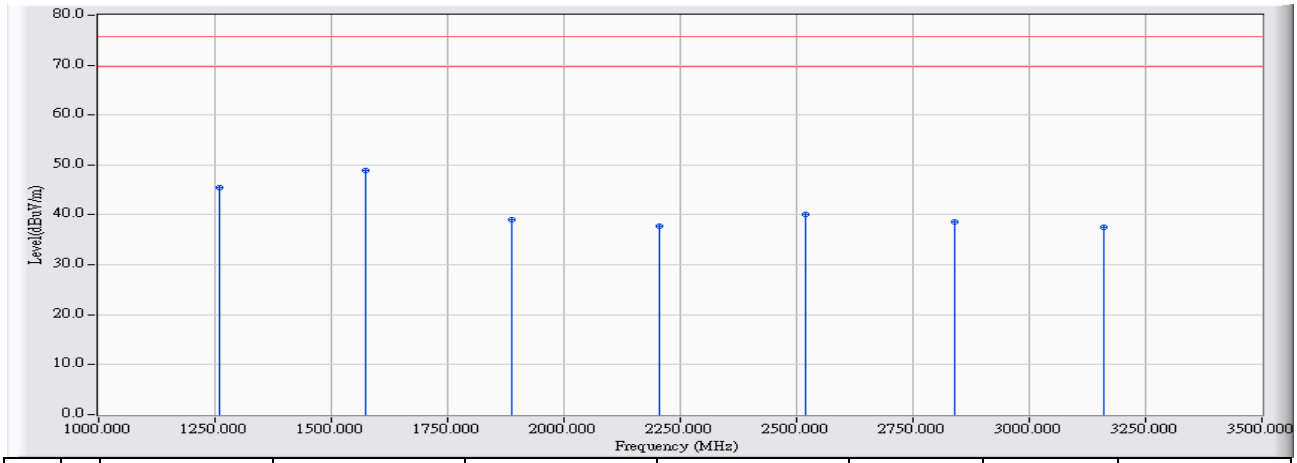



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 1260.200 | -10.366 | 49.930 | 39.565 | -36.058 | 75.623 | PEAK |
| 2 | | 1575.060 | -8.899 | 49.660 | 40.761 | -34.862 | 75.623 | PEAK |
| 3 | | 1889.840 | -7.904 | 43.570 | 35.666 | -39.957 | 75.623 | PEAK |
| 4 | | 2205.070 | -5.511 | 44.280 | 38.769 | -36.854 | 75.623 | PEAK |
| 5 | | 2512.010 | -2.611 | 42.480 | 39.869 | -35.754 | 75.623 | PEAK |
| 6 | * | 2835.260 | -3.552 | 44.500 | 40.948 | -34.675 | 75.623 | PEAK |
| 7 | | 3150.160 | -3.971 | 41.760 | 37.789 | -37.834 | 75.623 | PEAK |

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.
4. 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.

| | |
|---|---|
| **Site : CB1** | **Time : 2015/01/05 - 16:42** |
| **Limit : FCC_SpartC_15.231(B)_H_315MHz_03M_PK** | **Margin : 6** |
| **Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL** | **Power : DC 3V (Power by Battery)** |
| **EUT : SMART KEY Key FOB** | **Note : Axis- X** |




| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 1260.060 | -10.366 | 55.770 | 45.404 | -30.219 | 75.623 | PEAK |
| 2 | * | 1575.170 | -8.899 | 57.720 | 48.822 | -26.801 | 75.623 | PEAK |
| 3 | | 1889.000 | -7.907 | 47.020 | 39.113 | -36.510 | 75.623 | PEAK |
| 4 | | 2205.370 | -5.509 | 43.210 | 37.702 | -37.921 | 75.623 | PEAK |
| 5 | | 2520.310 | -2.632 | 42.660 | 40.028 | -35.595 | 75.623 | PEAK |
| 6 | | 2840.550 | -3.567 | 42.210 | 38.643 | -36.980 | 75.623 | PEAK |
| 7 | | 3158.770 | -3.968 | 41.510 | 37.543 | -38.080 | 75.623 | PEAK |

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.
4. 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. Occupied Bandwidth

## 3.1. Test Equipment

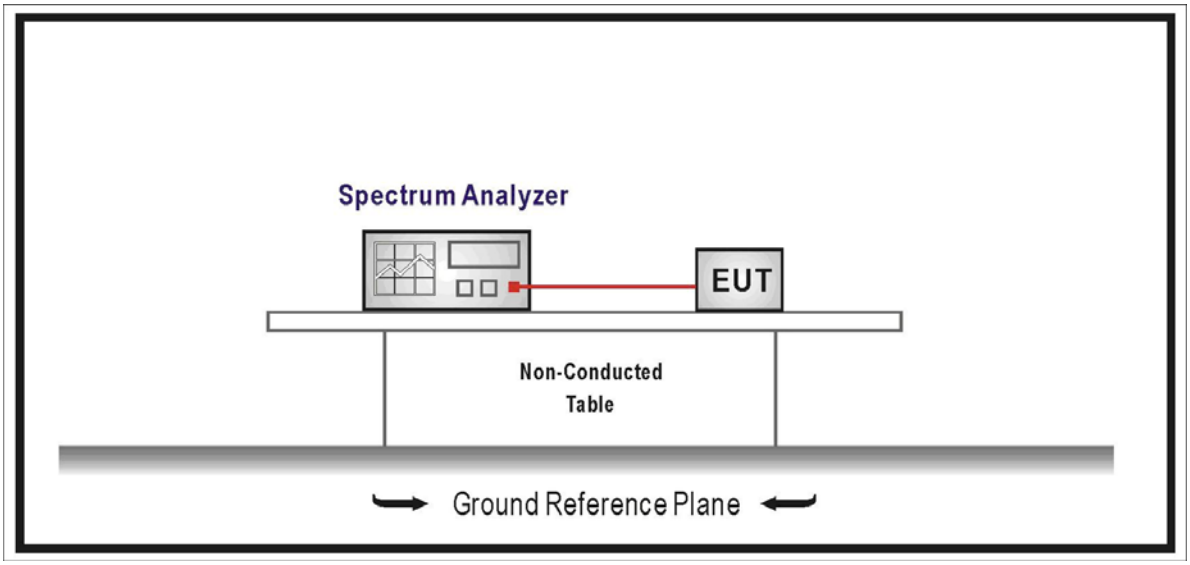
The following test equipments are used during the radiated emission tests:

**Occupied Bandwidth / SR7**

| Instrument | Manufacturer | Model No. | Serial No | Next Cal. Date |
|---|---|---|---|---|
| Spectrum Analyzer | Agilent | N9010A-EXA | US47140172 | 2015/07/14 |

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

## 3.2. Test Setup




## 3.3. Limits

The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70 MHz and below 900 MHz. For devices operating above 900 MHz, 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.

## 3.4. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.231(b): 2012

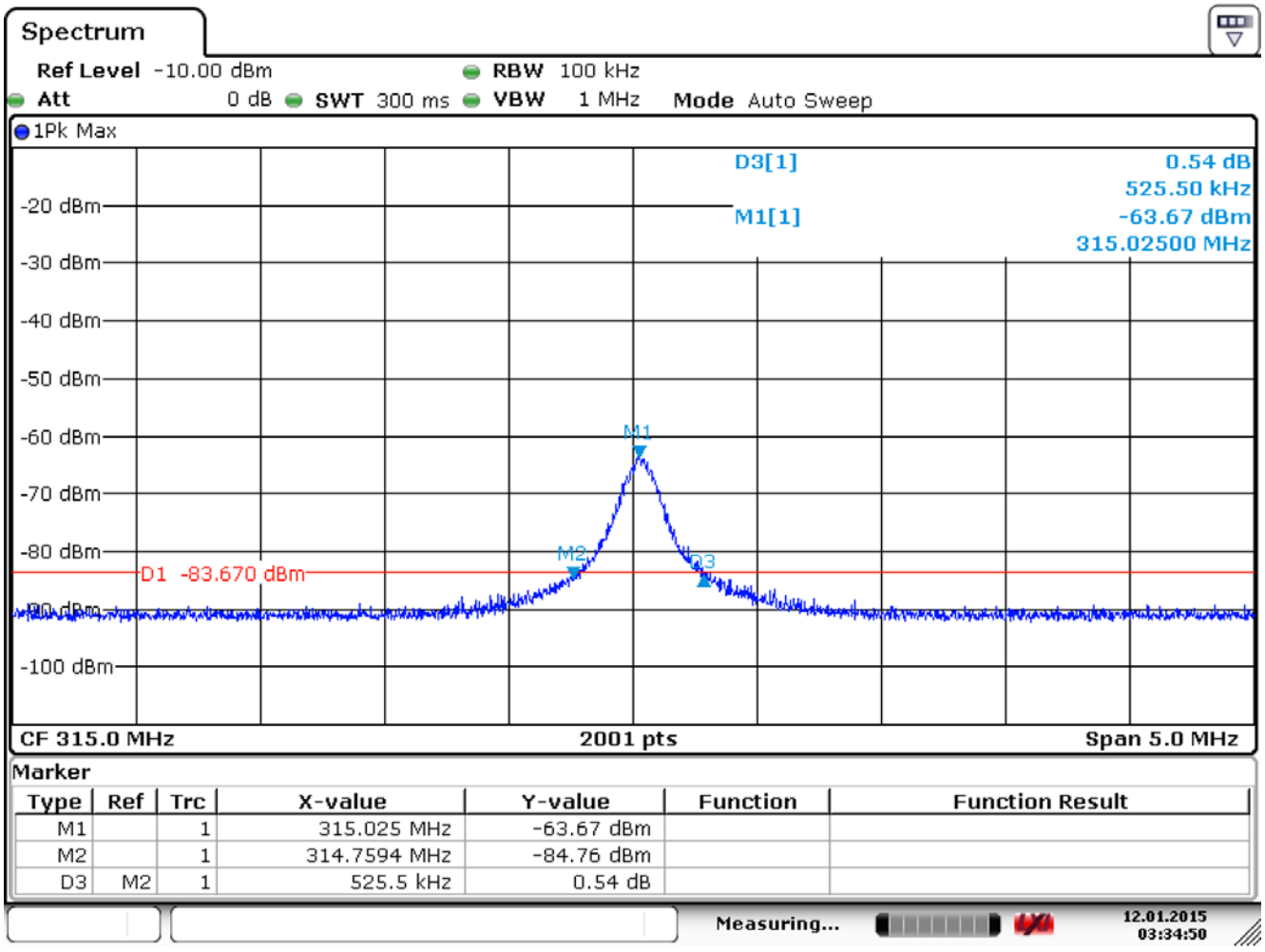
## 3.5. Uncertainty

± 150Hz

## 3.6. Test Result

| Product | SMART KEY Key FOB | | |
|---|---|---|---|
| Test Item | Occupied Bandwidth | | |
| Test Mode | Mode 1: Transmit_Remote_Power by Battery | | |
| Date of Test | 2015/01/12 | Test Site | SR7 |

| | |
|---|---|
| Center Frequency | 315 MHz |
| Allowable Bandwidth (315 MHz: 0.25%) | 787.5 kHz |
| Bandwidth at 20dB down (Max) | 525.5 kHz |
| Result | PASS |




Date: 12.JAN.2015 03:34:50

# 4. Duty cycle

## 4.1. Test Equipment

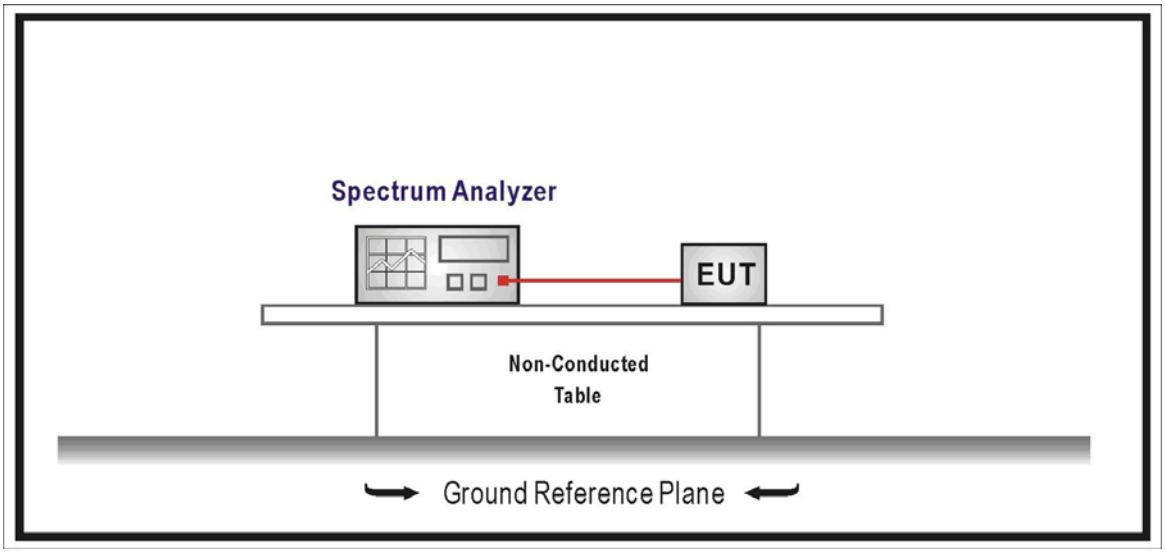
The following test equipments are used during the radiated emission tests:

**Duty cycle / SR7**

| Instrument | Manufacturer | Model No. | Serial No | Next Cal. Date |
|---|---|---|---|---|
| Spectrum Analyzer | Agilent | N9010A-EXA | US47140172 | 2015/07/14 |

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

## 4.2. Test Setup




## 4.3. Limits

N/A

## 4.4. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.231(b): 2012

## 4.5. Uncertainty

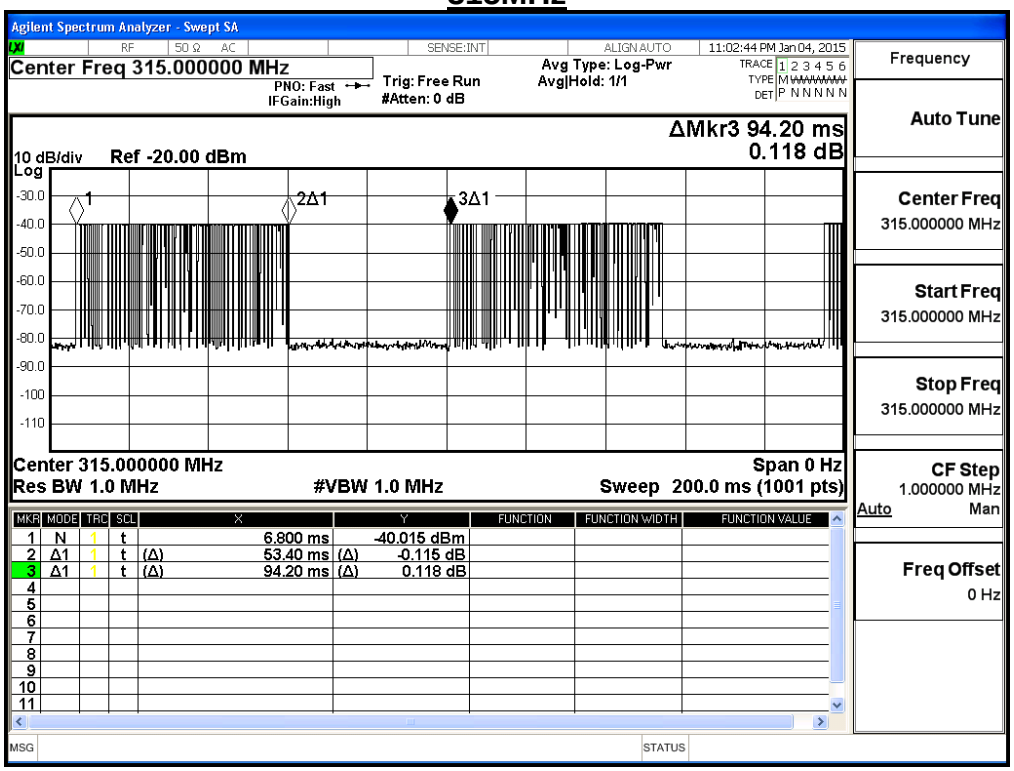
± 25msec

## 4.6. Test Result

| Product | SMART KEY Key FOB | | |
|---|---|---|---|
| Test Item | Duty Cycle | | |
| Test Mode | Mode 1: Transmit_Remote_Power by Battery | | |
| Date of Test | 2015/01/04 | Test Site | SR7 |

| Center Frequency | 315.00 MHz |
|---|---|
| Duty Cycle(Only Ton)<br>= Ton/ Ton+off=(53.4ms/94.2ms)<br>=0.567<br><br>Duty Cycle<br>=(Ton/(Ton+Toff))* Duty Cycle(Only Ton) =(80ms/100ms)*0.567<br>=0.453 | |

## 315MHz


Agilent Spectrum Analyzer - Swept SA
RF
50 Ω
AC
SENSE:INT
ALIGN AUTO
11:02:44 PM Jan 04, 2015
Center Freq 315.000000 MHz
PNO: Fast
IFGain:High
Trig: Free Run
#Atten: 0 dB
Avg Type: Log-Pwr
Avg|Hold: 1/1
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
ΔMkr3 94.20 ms
0.118 dB
10 dB/div
Log
Ref -20.00 dBm
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
-100
-110
1
2Δ1
3Δ1
Center 315.000000 MHz
Res BW 1.0 MHz
#VBW 1.0 MHz
Span 0 Hz
Sweep 200.0 ms (1001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 t 6.800 ms -40.015 dBm
2 Δ1 1 t (Δ) 53.40 ms (Δ) -0.115 dB
3 Δ1 1 t (Δ) 94.20 ms (Δ) 0.118 dB
4
5
6
7
8
9
10
11
MSG
STATUS
Frequency
Auto Tune
Center Freq
315.000000 MHz
Start Freq
315.000000 MHz
Stop Freq
315.000000 MHz
CF Step
1.000000 MHz
Auto
Man
Freq Offset
0 Hz

# 5. Transmitter time

## 5.1. Test Equipment

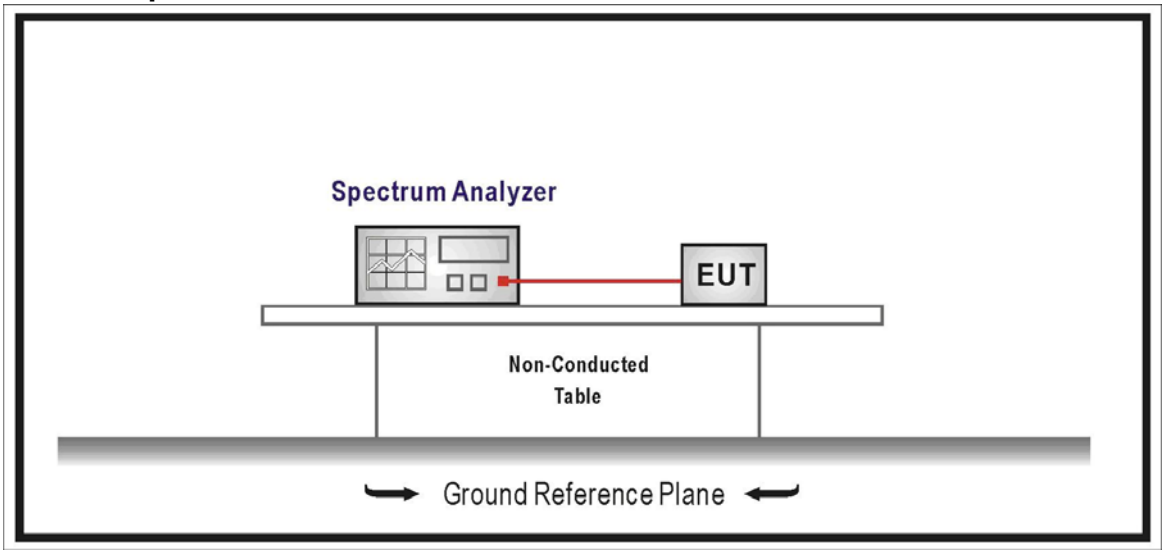
The following test equipments are used during the radiated emission tests:

**Transmitter time / SR7**

| Instrument | Manufacturer | Model No. | Serial No | Next Cal. Date |
|---|---|---|---|---|
| Signal Analyzer | R&S | FSV7 | 101650 | 2015/12/17 |

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

## 5.2. Test Setup




## 5.3. Limits

The duration of each transmission shall not be greater than one second and the silent period between transmissions shall be at least 30 times the duration of the transmission but in no case less than 10 seconds.

## 5.4. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.231(b): 2012

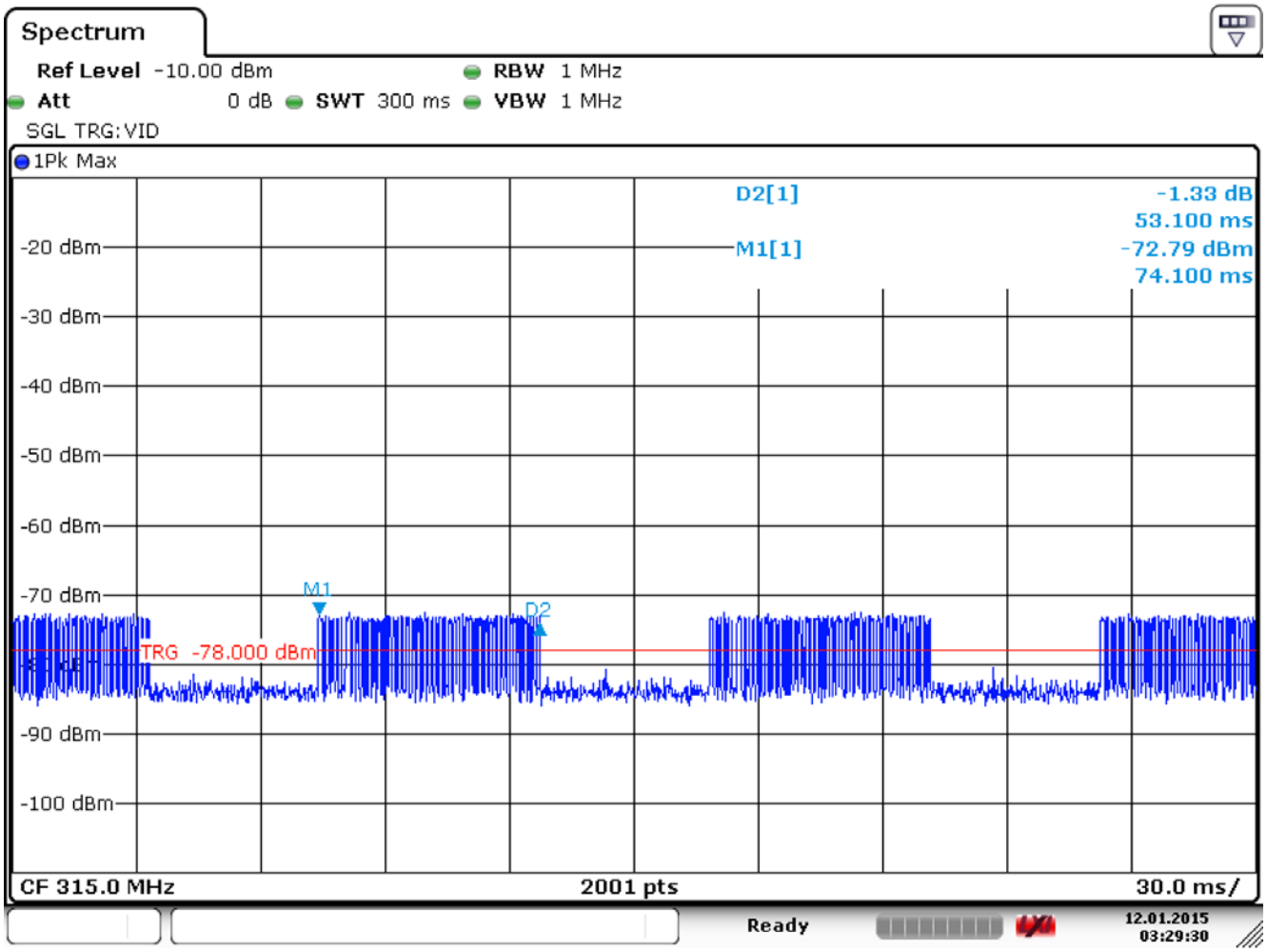
## 5.5. Uncertainty

± 25msec

## 5.6. Test Result

| Product | SMART KEY Key FOB | | |
|---|---|---|---|
| Test Item | Transmitter time | | |
| Test Mode | Mode 1: Transmit_Remote_Power by Battery | | |
| Date of Test | 2015/01/12 | Test Site | SR7 |

| | |
|---|---|
| Center Frequency | 315 MHz |
| Transmitter time = 53.1ms < 5 sec. | Below 5 sec. |
| Result | PASS |




Date: 12.JAN.2015 03:29:30