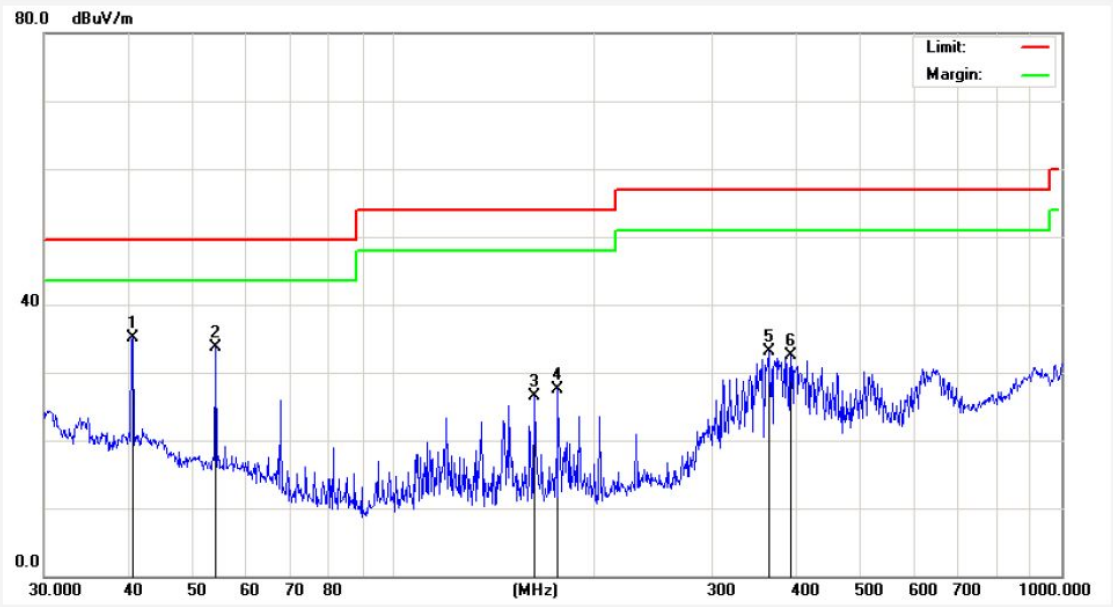
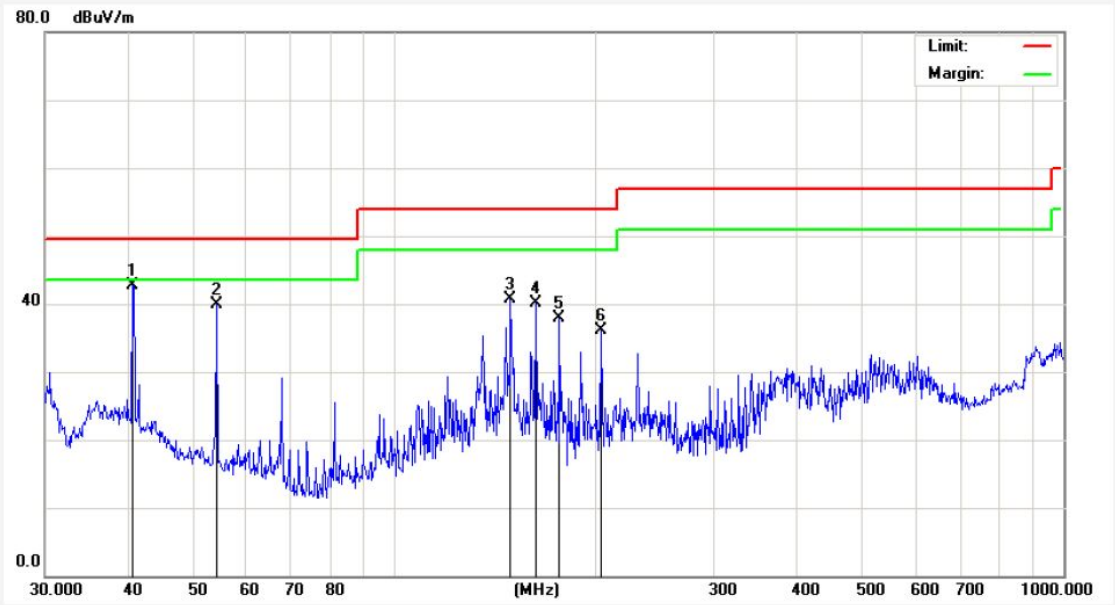
Job No.:	**011412109E**	**Polarization:**	**Horizontal**
Standard:	**(RE)FCC PART 15C _3m**	**Power Source:**	**DC 5V Via USB Port**
Test item:	**Radiation Test (30~1000MHz)**	**Temp.(C)/Hum.(%RH):**	**24.3(C)/55%RH**
Test Mode:	**USB Mode**	**Distance:**	**3m**



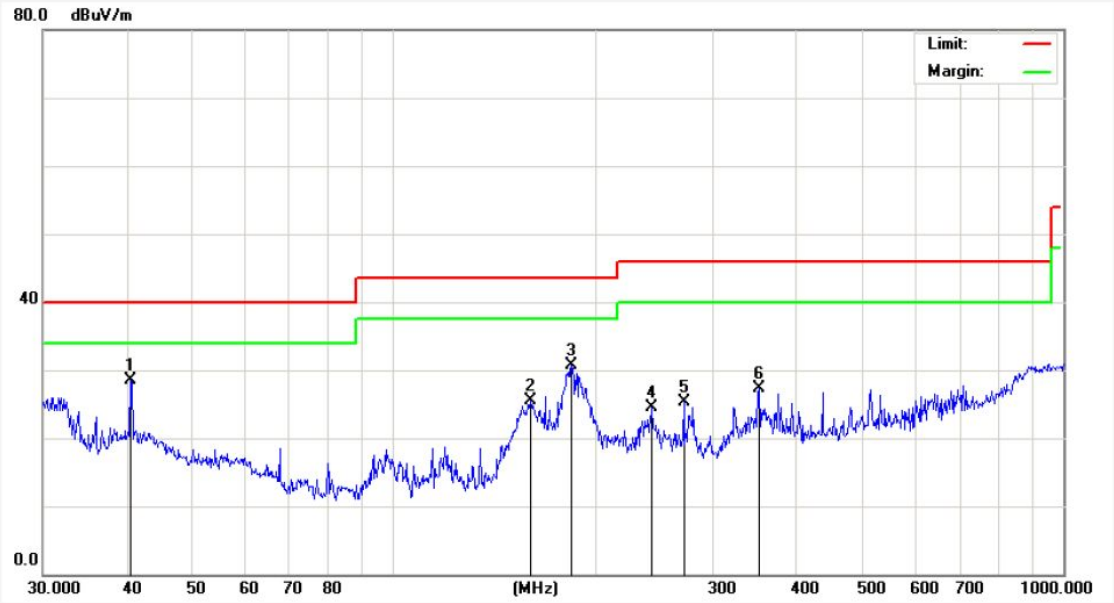
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	40.7016	45.83	-10.64	35.19	49.50	-14.31	peak			
2	54.2610	48.58	-14.87	33.71	49.50	-15.79	peak			
3	162.6106	49.38	-22.79	26.59	54.00	-27.41	peak			
4	176.2686	49.60	-22.12	27.48	54.00	-26.52	peak			
5	364.2595	46.60	-13.58	33.02	56.90	-23.88	peak			
6	393.4723	45.44	-13.00	32.44	56.90	-24.46	peak			

Job No.:	**011412109E**	**Polarization:**	**Vertical**
Standard:	**(RE)FCC PART 15C _3m**	**Power Source:**	**DC 5V Via USB Port**
Test item:	**Radiation Test (30~1000MHz)**	**Temp.(C)/Hum.(%RH):**	**24.3(C)/55%RH**
Test Mode:	**USB Mode**	**Distance:**	**3m**



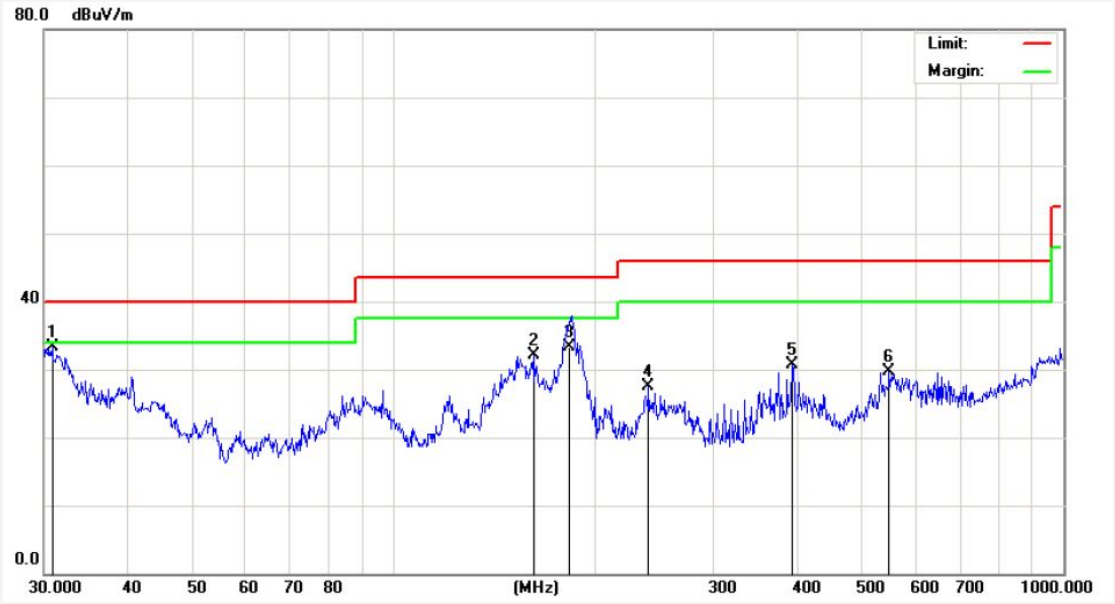
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	40.5591	53.33	-10.58	42.75	49.50	-6.75	peak			
2	54.2610	54.74	-14.87	39.87	49.50	-9.63	peak			
3	148.9625	59.15	-18.36	40.79	54.00	-13.21	peak			
4	162.6106	57.97	-17.79	40.18	54.00	-13.82	peak			
5	176.2686	55.07	-17.12	37.95	54.00	-16.05	peak			
6	203.5227	51.81	-15.73	36.08	54.00	-17.92	peak			

Job No.:	**011412109E**	**Polarization:**	**Horizontal**
Standard:	**(RE)FCC PART 15C _3m**	**Power Source:**	**DC 3.7V**
Test item:	**Radiation Test (30~1000MHz)**	**Temp.(C)/Hum.(%RH):**	**24.3(C)/55%RH**
Test Mode:	**BT Mode**	**Distance:**	**3m**



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	40.5591	39.14	-10.58	28.56	40.00	-11.44	peak			
2	160.3456	48.39	-22.86	25.53	43.50	-17.97	peak			
3	184.4898	52.20	-21.44	30.76	43.50	-12.74	peak			
4	243.3771	42.65	-18.24	24.41	46.00	-21.59	peak			
5	271.3245	43.82	-18.56	25.26	46.00	-20.74	peak			
6	351.7079	41.29	-13.92	27.37	46.00	-18.63	peak			

Job No.:	**011412109E**	**Polarization:**	**Vertical**
Standard:	**(RE)FCC PART 15C _3m**	**Power Source:**	**DC 3.7V**
Test item:	**Radiation Test (30~1000MHz)**	**Temp.(C)/Hum.(%RH):**	**24.3(C)/55%RH**
Test Mode:	**BT Mode**	**Distance:**	**3m**



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	30.8535	49.73	-16.50	33.23	40.00	-6.77	peak			
2	161.4742	49.87	-17.83	32.04	43.50	-11.46	peak			
3	182.2598	49.97	-16.64	33.33	43.50	-10.17	QP	100	0	
4	239.9874	41.51	-14.09	27.42	46.00	-18.58	peak			
5	393.4723	42.71	-12.00	30.71	46.00	-15.29	peak			
6	549.0195	39.88	-10.10	29.78	46.00	-16.22	peak			

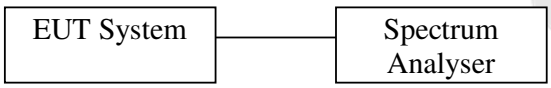
5. Frequency Tolerance

5.1. Frequency Tolerance Limits

The frequency tolerance of the carrier signal shall be maintained within ±0.01% of the operating frequency.

Fundamental Frequency (MHz)	Limit of Tolerance Bandwidth (Hz)
13.56	13.56*1000*1000*0.01%=1356

5.2. Test Setups



Test Equipment

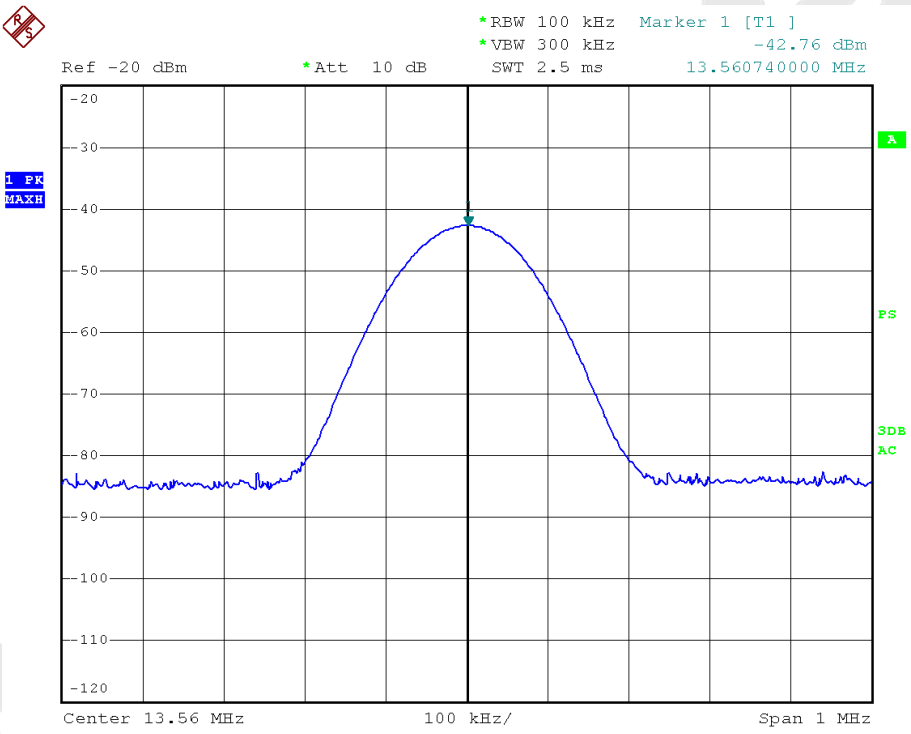
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analysis	Agilent	E4407B	US39390582	Aug. 08, 2014	1 Year
2.	Preamplifier	Instruments corporation	EMC011830	980100	Aug. 08, 2014	1 Year
3.	EMI Test Receiver	Rohde & Schwarz	ESPI	101604	Apr. 22, 2014	1 Year
4.	Double Ridged Horn Antenna	Instruments corporation	GTH-0118	351600	Apr. 04, 2014	1 Year
5.	Bilog Broadband Antenna	Schwarzbeck	VULB9163	VULB 9163-289	Apr. 24, 2014	1 Year
6.	Pre-amplifier	SONOMA	310N	186860	Aug. 08, 2014	1 Year
7.	EMI Test Software EZ-EMC	SHURPLE	N/A	N/A	N/A	N/A

5.3. Test Procedure

Let the EUT works on temperature variation of −20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.

5.4. Test Results

Test Condition				
	Voltage (V)	Temperature (℃)	Test Result (Hz)	Limit (Hz)
Normal Condition	DC 3.7V	-20	739	1356
		+20	741	1356
		+50	737	1356
Extreme Condition	DC 4.07V	+20	743	1356
	DC 3.33V	+20	736	1356



6. 20dB Bandwidth

6.1. Limits

According to 15.215 (c):
Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

6.2. Test Setups

Test Equipment

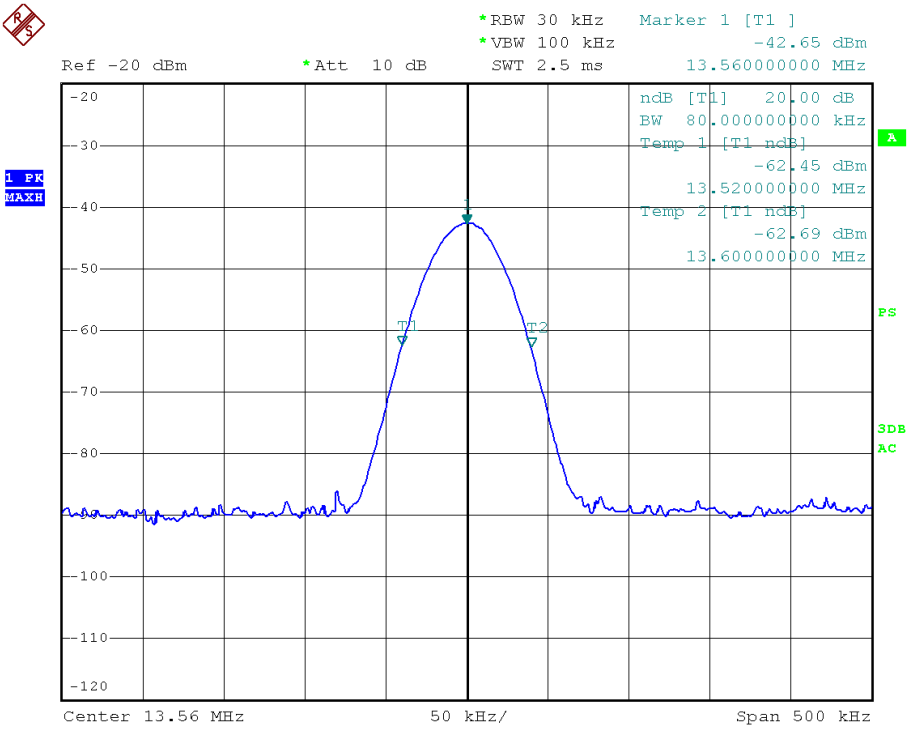
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analysis	Agilent	E4407B	US39390582	Aug. 08, 2014	1 Year
2.	Preamplifier	Instruments corporation	EMC011830	980100	Aug. 08, 2014	1 Year
3.	EMI Test Receiver	Rohde & Schwarz	ESPI	101604	Apr. 22, 2014	1 Year
4.	Double Ridged Horn Antenna	Instruments corporation	GTH-0118	351600	Apr. 04, 2014	1 Year
5.	Bilog Broadband Antenna	Schwarzbeck	VULB9163	VULB 9163-289	Apr. 24, 2014	1 Year
6.	Pre-amplifier	SONOMA	310N	186860	Aug. 08, 2014	1 Year
7.	EMI Test Software EZ-EMC	SHURPLE	N/A	N/A	N/A	N/A

6.3. Test Procedure

The bandwidth of the fundamental frequency was measured by spectrum analyzer with 30kHz RBW and 100kHz VBW. The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

6.4. Test Results

Frequency (MHz)	20dB BW (kHz)
13.56	80.0


*RBW 30 kHz
*VBW 100 kHz
Ref -20 dBm
*Att 10 dB
SWT 2.5 ms
Marker 1 [T1]
-42.65 dBm
13.560000000 MHz
ndB [T1] 20.00 dB
BW 80.000000000 kHz
Temp 1 [T1 ndB]
-62.45 dBm
13.520000000 MHz
Temp 2 [T1 ndB]
-62.69 dBm
13.600000000 MHz
1 PK
MAXH
A
PS
3DB
AC
-20
-30
-40
-50
-60
-70
-80
-100
-110
-120
T1
T2
Center 13.56 MHz
50 kHz/
Span 500 kHz

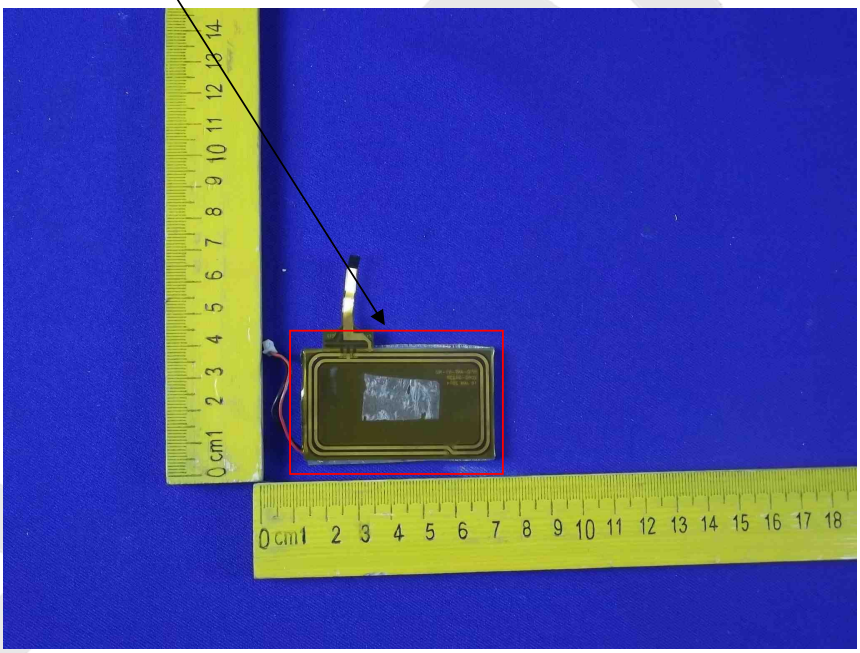
7. Antenna Application

7.1. Antenna Requirement

The EUT'S antenna should met the requirement of FCC part 15C section 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:
1) Antenna must be permanently attached to device.
2) The antenna must use a unique type of connector to attach to the device.
3) Device must be professionally installed. The installer shall be responsible for ensuring that the correct antenna is employed by the device.

7.2. Result

The RFID antenna is integral to the PCB board permanently to the device which meets the requirement, see the below:



8. PHOTOGRAPH

8.1 Photo of Conducted Emission Test

8.2 Photo of Radiation Emission Test

APPENDIX I (EXTERNAL PHOTOS)

Figure 1
The EUT-Top View

Figure 2
The EUT-Bottom View