FCC Testing of the
Shot Scope Technologies Ltd
GPS Golf Watch, Model: Shot Scope V2
In accordance with FCC 47 CFR Part 15C

Prepared for: Shot Scope Technologies Ltd
Unit 27
Castlebrae Business Centre
40 Peffer Place
Edinburgh
EH16 4BB
UNITED KINGDOM

FCC ID: 2AHWR-SS03

Product Service

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Date: September 2017
Document Number: 75940057-09 | Issue: 01

RESPONSIBLE FOR	NAME	DATE	SIGNATURE
Project Management	Natalie Bennett	04 October 2017	
Authorised Signatory	Nic Forsyth	04 October 2017	

Signatures in this approval box have checked this document in line with the requirements of TÜV SÜD Product Service document control rules.

ENGINEERING STATEMENT
The measurements shown in this report were made in accordance with the procedures described on test pages. All reported testing was carried out on a sample equipment to demonstrate limited compliance with FCC 47 CFR Part 15C. The sample tested was found to comply with the requirements defined in the applied rules.

RESPONSIBLE FOR	NAME	DATE	SIGNATURE
Testing	Mehadi Choudhury	04 October 2017	
Testing	Graeme Lawler	04 October 2017	

FCC Accreditation
90987 Octagon House, Fareham Test Laboratory

EXECUTIVE SUMMARY
A sample of this product was tested and found to be in compliance with FCC 47 CFR Part 15C: 2016 for the tests detailed in section 1.3.

TÜV SÜD Product Service
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Product Service

Contents

1 Report Summary

1.1 Report Modification Record

Alterations and additions to this report will be issued to the holders of each copy in the form of a complete document.

Issue	Description of Change	Date of Issue
1	First Issue	04 October 2017

Table 1

1.2 Introduction

Applicant	Shot Scope Technologies Ltd
Manufacturer	Shot Scope Technologies Ltd
Model Number(s)	Shot Scope V2
Serial Number(s)	Not Serialised (75940057-TRS0006)
Hardware Version(s)	1.2
Software Version(s)	1.0
Number of Samples Tested	1
Test Specification/Issue/Date	FCC 47 CFR Part 15C: 2016
Order Number Date	TUV SUD CE & FCC 001 31-July-2017
Date of Receipt of EUT	29-August-2017
Start of Test	30-August-2017
Finish of Test	07-September-2017
Name of Engineer(s)	Mehadi Choudhury and Graeme Lawler
Related Document(s)	ANSI C63.10 (2014)

1.3 Brief Summary of Results

A brief summary of the tests carried out in accordance with FCC 47 CFR Part 15C is shown below.

Section	Specification Clause	Test Description	Result	Comments/Base Standard
Configuration and Mode: 13.56 MHz RFiD Transceiver				
2.1	15.215 (c)	20 dB Bandwidth	Pass	ANSI C63.10
2.2	15.225 (a)(b)(c)(d)	Field Strength of any Emission	Pass	ANSI C63.10
2.3	15.225 (e)	Frequency Tolerance Under Temperature Variations	Pass	ANSI C63.10

Table 2

1.4 Application Form

EQUIPMENT DESCRIPTION	
Model Name/Number	Shot Scope V2
Part Number	SSP-GPS-01
Hardware Version	1.2
Software Version	1.0
FCC ID (if applicable)	
Industry Canada ID (if applicable)	
Technical Description (Please provide a brief description of the intended use of the equipment)	Shot Scope V2 is used by golfers to provide distance information from their position to their target. It also tracks how far each golf shot is hit and what golf club was used.

Types of Modulations used by the Equipment	
☐	FHSS
☒	Other forms of modulation
In case of FHSS Modulation	
In case of non-Adaptive Frequency Hopping equipment:	
	Number of Hopping Frequencies:
In case of Adaptive Frequency Hopping Equipment:	
	Maximum number of Hopping Frequencies:
	Minimum number of Hopping Frequencies:
Dwell Time:	
Adaptive / non-adaptive equipment:	
☐	non-adaptive Equipment
☐	adaptive Equipment without the possibility to switch to a non-adaptive mode
☐	adaptive Equipment which can also operate in a non-adaptive mode
In case of adaptive equipment:	
The maximum Channel Occupancy Time implemented by the equipment: ms	
☐	The equipment has implemented an LBT based DAA mechanism
In case of equipment using modulation different from FHSS:	
☐	The equipment is Frame Based equipment
☐	The equipment is Load Based equipment
☐	The equipment can switch dynamically between Frame Based and Load Based equipment
The CCA time implemented by the equipment: µs	
☐	The equipment has implemented an non-LBT based DAA mechanism
☐	The equipment can operate in more than one adaptive mode

In case of non-adaptive Equipment:	
The maximum RF Output Power (e.i.r.p.): dBm	
The maximum (corresponding) Duty Cycle: %	
Equipment with dynamic behaviour, that behaviour is described here. (e.g. the different combinations of duty cycle and corresponding power levels to be declared):	
The worst case operational mode for each of the following tests:	
RF Output Power: -10 dBW	
Power Spectral Density: 10 dBm per MHz	
Duty cycle, Tx-Sequence, Tx-gap: BLE	
Accumulated Transmit Time, Frequency Occupation & Hopping Sequence (only for FHSS equipment):	
Hopping Frequency Separation (only for FHSS equipment):	
Medium Utilisation:	
Adaptivity & Receiver Blocking:	
Nominal Channel Bandwidth: 2MHz	
Transmitter unwanted emissions in the OOB domain:	
Transmitter unwanted emissions in the spurious domain:	
Receiver spurious emissions:	
The different transmit operating modes (tick all that apply):	
☒	Operating mode 1: Single Antenna Equipment
☒	Equipment with only 1 antenna
☐	Equipment with 2 diversity antennas but only 1 antenna active at any moment in time
☐	Smart Antenna Systems with 2 or more antennas, but operating in a (legacy) mode where only 1 antenna is used. (e.g. IEEE 802.11™ [i.3] legacy mode in smart antenna systems)
☐	Operating mode 2: Smart Antenna Systems - Multiple Antennas without beam forming
☐	Single spatial stream / Standard throughput / (e.g. IEEE 802.11™ [i.3] legacy mode)
☐	High Throughput (> 1 spatial stream) using Nominal Channel Bandwidth 1
☐	High Throughput (> 1 spatial stream) using Nominal Channel Bandwidth 2
☐	High Throughput (> 1 spatial stream) using Nominal Channel Bandwidth 3
☐	High Throughput (> 1 spatial stream) using Nominal Channel Bandwidth 4
☐	High Throughput (> 1 spatial stream) using Nominal Channel Bandwidth 5
NOTE: Add more lines if more channel bandwidths are supported.	
☐	Operating mode 3: Smart Antenna Systems - Multiple Antennas with beam forming
☐	Single spatial stream / Standard throughput (e.g. IEEE 802.11™ [i.3] legacy mode)
☐	High Throughput (> 1 spatial stream) using Nominal Channel Bandwidth 1
☐	High Throughput (> 1 spatial stream) using Nominal Channel Bandwidth 2
☐	High Throughput (> 1 spatial stream) using Nominal Channel Bandwidth 3
☐	High Throughput (> 1 spatial stream) using Nominal Channel Bandwidth 4
☐	High Throughput (> 1 spatial stream) using Nominal Channel Bandwidth 5
NOTE: Add more lines if more channel bandwidths are supported.	

In case of Smart Antenna Systems:
The number of Receive chains:
The number of Transmit chains:
☐ symmetrical power distribution
☐ asymmetrical power distribution
In case of beam forming, the maximum (additional) beam forming gain: dB
NOTE: The additional beam forming gain does not include the basic gain of a single antenna.
Operating Frequency Range(s) of the equipment:
Operating Frequency Range 1: 2402 MHz to 2481 MHz
Operating Frequency Range 2: MHz to MHz
Operating Frequency Range 3: MHz to MHz
NOTE: Add more lines if more Frequency Ranges are supported.
Nominal Channel Bandwidth(s):
Nominal Channel Bandwidth1: 2 MHz
Nominal Channel Bandwidth2: MHz
Nominal Channel Bandwidth3: MHz
Nominal Channel Bandwidth4: MHz
Nominal Channel Bandwidth5: MHz
NOTE: Add more lines if more channel bandwidths are supported.
Type of Equipment (stand-alone, combined, plug-in radio device, etc.):
☒ Stand-alone
☐ Combined Equipment (Equipment where the radio part is fully integrated within another type of equipment)
☐ Plug-in radio device (Equipment intended for a variety of host systems)
☐ Other
The normal and extreme operating conditions that apply to the equipment:
Normal operating conditions (if applicable):
Operating temperature: 20 °C
Other (please specify if applicable):
Extreme operating conditions:
Operating temperature range: Minimum 0 °C to Maximum 85 °C
Other (please specify if applicable): Minimum °C to Maximum °C
Details provided are for the:
☒ stand-alone equipment
☐ combined (or host) equipment
☐ test jig

The intended combination(s) of the radio equipment power settings and one or more antenna assemblies and their corresponding e.i.r.p levels:			
Antenna Type:			
☒ Integral Antenna (information to be provided in case of conducted measurements)			
Antenna Gain: 2.2 dBi			
If applicable, additional beamforming gain (excluding basic antenna gain): dB			
☐ Temporary RF connector provided			
☐ No temporary RF connector provided			
☐ Dedicated Antennas (equipment with antenna connector)			
☐ Single power level with corresponding antenna(s)			
☐ Multiple power settings and corresponding antenna(s)			
Number of different Power Levels:			
Power Level 1: dBm			
Power Level 2: dBm			
Power Level 3: dBm			
NOTE 1: Add more lines in case the equipment has more power levels.			
NOTE 2: These power levels are conducted power levels (at antenna connector).			
For each of the Power Levels, provide the intended antenna assemblies, their corresponding gains (G) and the resulting e.i.r.p. levels also taking into account the beamforming gain (Y) if applicable			
Power Level 1: dBm			
Number of antenna assemblies provided for this power level:			
Assembly #	**Gain (dBi)**	**e.i.r.p (dBm)**	**Part number or model number**
1			
2			
3			
4			
NOTE: Add more rows in case more antenna assemblies are supported for this power level.			
Power Level 2: dBm			
Number of antenna assemblies provided for this power level:			
Assembly #	**Gain (dBi)**	**e.i.r.p (dBm)**	**Part number or model number**
1			
2			
3			
4			
NOTE: Add more rows in case more antenna assemblies are supported for this power level.			
Power Level 3: dBm			
Number of antenna assemblies provided for this power level:			
Assembly #	**Gain (dBi)**	**e.i.r.p (dBm)**	**Part number or model number**
1			
2			
3			
4			
NOTE: Add more rows in case more antenna assemblies are supported for this power level.			

The nominal voltages of the stand-alone radio equipment or the nominal voltages of the combined (host) equipment or test jig in case of plug-in devices:	
Details provided are for the:	
☒ stand-alone equipment	
☐ combined (or host) equipment	
☐ test jig	
Supply Voltage ☐ AC mains State AC voltage V	
☒ DC State DC voltage 3.0 - 4.2 V	
In case of DC, indicate the type of power source	
☐ Internal Power Supply	
☐ External Power Supply or AC/DC adapter	
☒ Battery	
☐ Other:	
Describe the test modes available which can facilitate testing:	
Custom software to enable Packet Error Ratio test between two bands, one in Tx mode, one in Rx mode.	
The equipment type (e.g. Bluetooth®, IEEE 802.11™ [i.3] IEEE 802.15.4™ [i.4], proprietary, etc.):	
If applicable, the statistical analysis referred in clause 5.4.1 q)	
To be provided as separate attachment	
If applicable, the statistical analysis referred in clause 5.4.1 r)	
To be provided as separate attachment	
Geo-location capability supported by the equipment:	
☐ Yes	
☐ The geographical location determined by the equipment as defined in clause 4.3.1.13.2 or clause 4.3.2.12.2 is not accessible to the user.	
☐ No	
Describe the minimum performance criteria that apply to the equipment (see clause 4.3.1.12.3 or 4.3.2.11.3)	
Combination for testing (see clause 5.3.2.3 of EN 300 328 V21.1)	
From all combinations of conducted power settings and intended antenna assembly(ies) specified in clause 5.4.1 m), specify the combination resulting in the highest e.i.r.p. for the radio equipment. Unless otherwise specified in ETSI EN 300 328, this power setting is to be used for testing against the requirements of ETSI EN 300 328. In case there is more than one such conducted power setting resulting in the same (highest) e.i.r.p. level, the highest power setting is to be used for testing. See also ETS EN 300 328, clause 5.3.2.3	
Highest overall e.i.r.p. value: 0.2 dBm	
Corresponding Antenna assembly gain: 2.2 dBi	Antenna Assembly #:
Corresponding conducted power setting: -2 dBm (also the power level to be used for testing)	Listed as Power Setting #:
Additional information provided by the applicant	
Modulation	
ITU Class(es) of emission:	
Can the transmitter operate unmodulated? ☐ Yes ☒ No	

Duty Cycle	
The transmitter is intended for:	
☐	Continuous duty
☐	Intermittent duty
☒	Continuous operation possible for testing purposes
About the UUT	
☐	The equipment submitted are representative production models
☒	If not, the equipment submitted are pre-production models?
☒	If pre-production equipment are submitted, the final production equipment will be identical in all respects with the equipment tested
☐	If not, supply full details
☐	The equipment submitted is CE marked
Additional items and/or supporting equipment provided	
☐	Spare batteries (e.g. for portable equipment)
☒	Battery charging device
☐	External Power Supply or AC/DC adapter
☐	Test Jig or interface box
☐	RF test fixture (for equipment with integrated antennas)
☐	Host System
	Manufacturer
	Model
	Model Name
☐	Combined equipment
	Manufacturer
	Model
	Model Name
☒	User Manual
☒	Technical documentation (Handbook and circuit diagrams)

I hereby declare that the information supplied is correct and complete.

Name: Lewis Allison Position held: Chief Technology Officer
Date: 28/08/17

1.5 Product Information

1.5.1 Technical Description

Shot Scope V2 is used by golfers to provide distance information from their position to their target. It also tracks how far each golf shot is hit and what golf club was used.

1.6 Deviations from the Standard

No deviations from the applicable test standard were made during testing.

1.7 EUT Modification Record

The table below details modifications made to the EUT during the test programme.
The modifications incorporated during each test are recorded on the appropriate test pages.

Modification State	Description of Modification still fitted to EUT	Modification Fitted By	Date Modification Fitted
Serial Number: Not Serialised (75940057-TRS0006)			
0	As supplied by the customer	Not Applicable	Not Applicable

Table 3

1.8 Test Location

TÜV SÜD Product Service conducted the following tests at our Fareham Test Laboratory.

Test Name	Name of Engineer(s)	Accreditation
Configuration and Mode: 13.56 MHz RFiD Transceiver		
20 dB Bandwidth	Mehadi Choudhury	UKAS
Field Strength of any Emission	Graeme Lawler	UKAS
Frequency Tolerance Under Temperature Variations	Mehadi Choudhury	UKAS

Table 4

Office Address:

Octagon House
Concorde Way
Segensworth North
Fareham
Hampshire
PO15 5RL
United Kingdom

2 Test Details

2.1 20 dB Bandwidth

2.1.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.215 (c)

2.1.2 Equipment Under Test and Modification State

Shot Scope V2, S/N: Not Serialised (75940057-TRS0006) - Modification State 0

2.1.3 Date of Test

05-September-2017

2.1.4 Test Method

The test was performed in accordance with ANSI C63.10, clause 6.9.1.

2.1.5 Environmental Conditions

Ambient Temperature	23.0 °C
Relative Humidity	67.5 %

2.1.6 Test Results

13.56 MHz RFiD Transceiver

Frequency (MHz)	20 dB Bandwidth (Hz)
13.56	4.0

Table 5

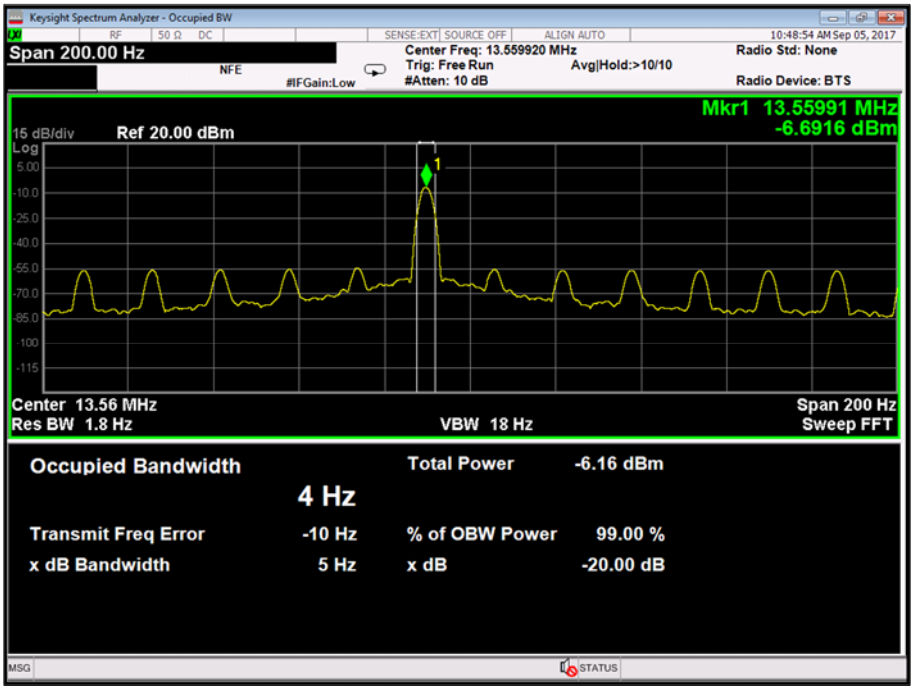

Figure 1 – 13.56 MHz

FCC 47 CFR Part 15, Limit Clause 15.215 (c)

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.

2.1.7 Test Location and Test Equipment Used

This test was carried out in RF Laboratory 1.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Due
Attenuator (10dB, 1W)	Sealectro	60-674-1010-89	1224	12	30-Jun-2018
Power Supply	Iso-tech	IPS 2010	2440	-	O/P Mon
Hygrometer	Rotronic	I-1000	3220	12	30-Aug-2018
Frequency Standard	Spectracom	Secure Sync 1200-0408-0601	4393	6	09-Sep-2017
PXA Signal Analyser	Keysight Technologies	N9030A	4653	12	12-Jan-2018

Table 6

O/P Mon – Output Monitored using calibrated equipment

2.2 Field Strength of any Emission

2.2.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.225 (a)(b)(c)(d)

2.2.2 Equipment Under Test and Modification State

Shot Scope V2, S/N: Not Serialised (75940057- TRS0006) - Modification State 0

2.2.3 Date of Test

30-August-2017

2.2.4 Test Method

The test was performed in accordance with ANSI C63.10, clause 6.3, 6.4 and 6.5.

2.2.5 Environmental Conditions

Ambient Temperature	21.2 °C
Relative Humidity	44.0 %

2.2.6 Test Results

13.56 MHz RFiD Transceiver

Frequency	Quasi-Peak Level (dBµV/m) at 3m	Quasi-Peak Level (dBµV/m) at 30m	Quasi-Peak Level (µV/m) at 3m	Quasi-Peak Level (µV/m) at 30m
13.56	67.81	46.43	2457.54	209.65

Table 7 – Carrier Results

Figure 2 – Plot of the Fundamental (13.56 MHz)

13.56 MHz RFiD Transceiver

Frequency	Quasi-Peak Level (dBµV/m) at 3m	Quasi-Peak Level (dBµV/m) at 30m	Quasi-Peak Level (µV/m) at 3m	Quasi-Peak Level (µV/m) at 30m
*				

Table 8 - Field Strength of any Emission Results, 9 kHz to 30 MHz

***** No emissions were detected within 10 dB of the limit.

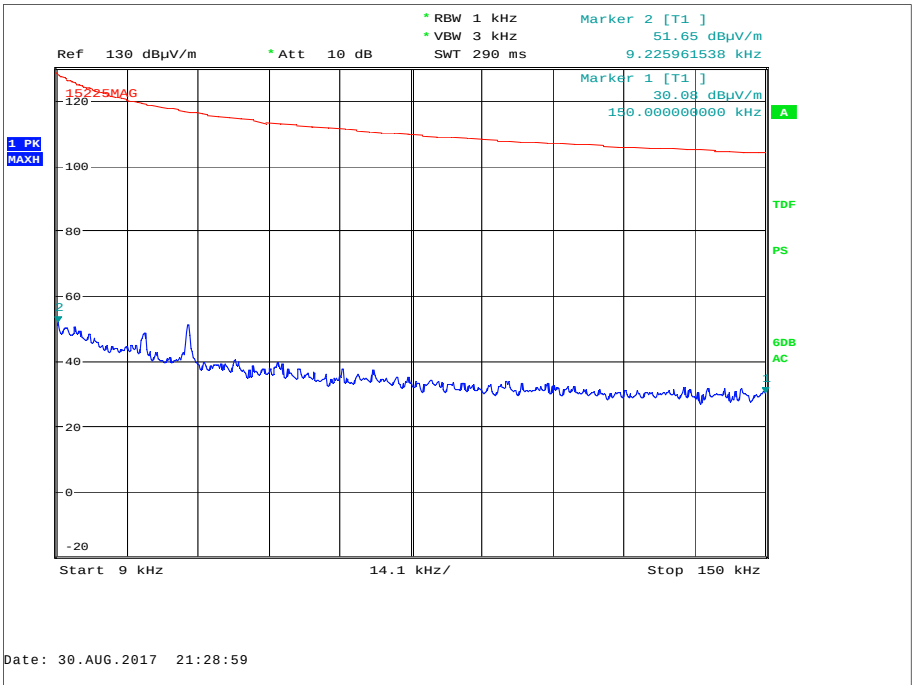

Figure 3 - 13.56 MHz RFiD Transceiver, 9 kHz to 150 kHz

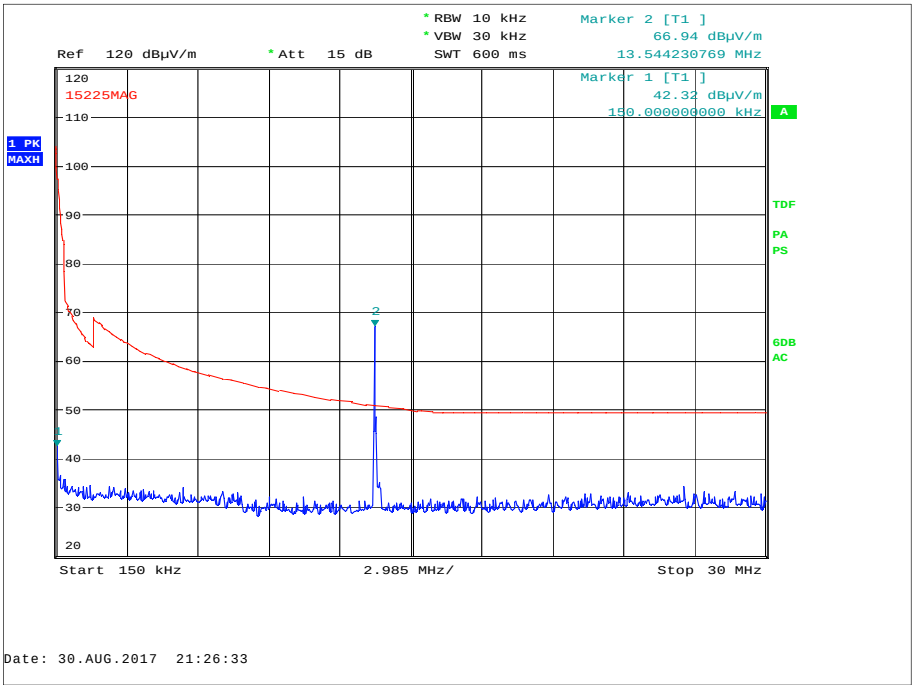

Figure 4 - 13.56 MHz RFiD Transceiver, 150 kHz to 30 MHz

13.56 MHz RFiD Transceiver

Frequency (MHz)	QP Level (dBuV/m)	QP Limit (dBuV/m)	QP Margin (dBuV/m)	Angle(Deg)	Height(m)	Polarity
30.761	30.2	40.0	-9.8	241	1.00	Face
352.549	38.8	46.0	-7.2	107	1.00	Face
786.469	43.3	46.0	-2.7	317	1.00	Face
813.595	39.9	46.0	-6.1	114	1.00	Face
854.282	39.5	46.0	-6.5	126	1.00	Face
881.401	39.5	46.0	-6.5	117	1.08	Face
894.949	40.1	46.0	-5.9	291	1.00	Face

Table 9 - Field Strength of any Emission Results, 30 MHz to 1 GHz

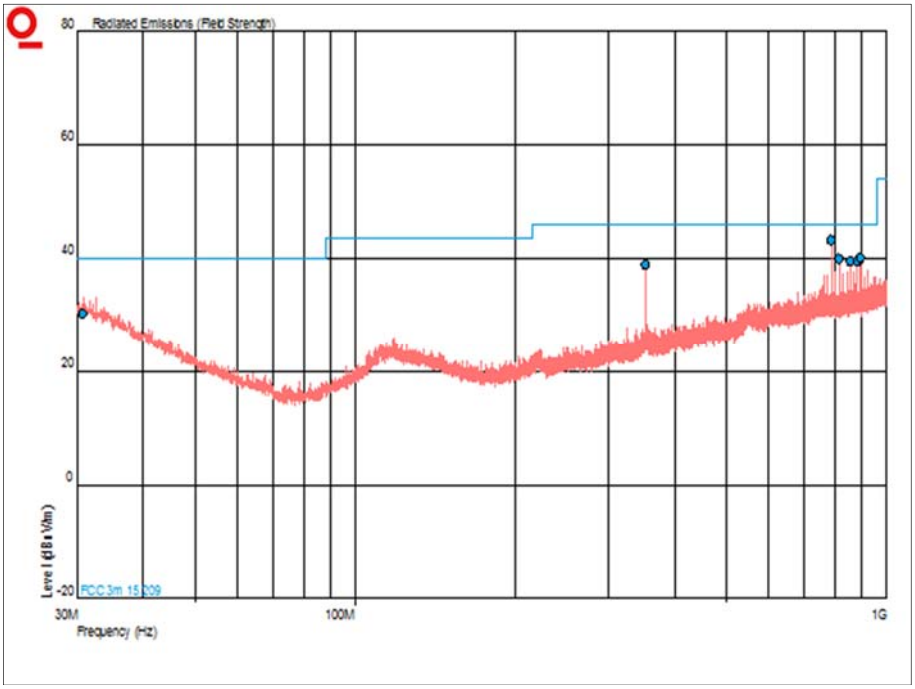

Figure 5 - 13.56 MHz RFiD Transceiver, 30 MHz to 1 GHz

Remarks

The level at 30m was calculated using the dBµV/m measurement at 3m and extrapolating this result to produce a level at 30m. This value was then converted to obtain the value in µV/m.

FCC 47 CFR Part 15, Limit Clause 15.225 (a)(b)(c)(d)

(a) The field strength of any emissions within the band 13.553–13.567 MHz shall not exceed 15,848 microvolts/meter at 30 meters.

(b) Within the bands 13.410–13.553 MHz and 13.567–13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters.

(c) Within the bands 13.110–13.410 MHz and 13.710–14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters.

(d) The field strength of any emissions appearing outside of the 13.110–14.010 MHz band shall not exceed the general radiated emission limits in § 15.209.

FCC 47 CFR Part 15, Limit Clause 15.209

Frequency (MHz)	Field Strength (µV/m)	Measurement Distance (m)
0.009 to 0.490	2400/F (kHz)	300
0.490 to 1.705	24000/F (kHz)	30
1705 to 30	30	30
30 to 88	100**	3
88 to 216	150**	3
216 to 960	200**	3
Above 960	500	5

2.2.7 Test Location and Test Equipment Used

This test was carried out in EMC Chamber 5.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Due
Antenna (Bilog)	Schaffner	CBL6143	287	24	18-Apr-2018
Antenna (Active Loop, 9kHz-30MHz)	Rohde & Schwarz	HFH2-Z2	333	24	09-Dec-2018
Antenna (Dish/Tripod/Adaptor, 1GHz-18GHz)	Rohde & Schwarz	AC-008	334	-	TU
Screened Room (5)	Rainford	Rainford	1545	36	20-Dec-2017
Turntable Controller	Inn-Co GmbH	CO 1000	1606	-	TU
Radio Communications Test Set	Rohde & Schwarz	CMU 200	3035	12	23-Nov-2017
Cable (N-N, 8m)	Rhophase	NPS-2302-8000-NPS	3248	12	02-May-2018
EMI Test Receiver	Rohde & Schwarz	ESU40	3506	12	12-Nov-2017
Tilt Antenna Mast	maturo Gmbh	TAM 4.0-P	3916	-	TU
Mast Controller	maturo Gmbh	NCD	3917	-	TU
Cable (Yellow, Rx, Km-Km 2m)	Scott Cables	KPS-1501-2000-KPS	4527	6	04-Nov-2017

Table 10

TU - Traceability Unscheduled

2.3 Frequency Tolerance Under Temperature Variations

2.3.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.225 (e)

2.3.2 Equipment Under Test and Modification State

Shot Scope V2, S/N: Not Serialised (75940057-TRS0006) - Modification State 0

2.3.3 Date of Test

07-September-2017

2.3.4 Test Method

The test was performed in accordance with ANSI C63.10, clause 6.8.

2.3.5 Environmental Conditions

Ambient Temperature	21.9 - 22.7 °C
Relative Humidity	22.8 - 55.4 %

2.3.6 Test Results

13.56 MHz RFiD Transceiver

Temperature	Voltage	Measured Frequency (MHz)	Frequency Deviation (%)	Frequency Error (ppm)
-30 °C	3.7 V DC	13.560	0.002	1.655
-20 °C	3.7 V DC	13.560	0.002	1.773
-10 °C	3.7 V DC	13.560	0.002	1.714
0 °C	3.7 V DC	13.560	-0.002	-1.536
+10 °C	3.7 V DC	13.560	-0.003	-2.600
+20 °C	4.2 V DC	13.560	-0.005	-5.318
+20 °C	3.0 V DC	13.560	-0.005	-4.964
+30 °C	3.7 V DC	13.560	-0.006	-6.146
+40 °C	3.7 V DC	13.560	-0.007	-6.738
+50 °C	3.7 V DC	13.560	-0.006	-5.555

Table 11

FCC 47 CFR Part 15, Limit Clause 15.225 (e)

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

2.3.7 Test Location and Test Equipment Used

This test was carried out in RF Laboratory 1.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Due
Attenuator (10dB, 1W)	Sealectro	60-674-1010-89	1224	12	30-Jun-2018
Attenuator (20dB, 1W)	Sealectro	60-674-1020-89	1520	-	O/P Mon
Power Supply	Iso-tech	IPS 2010	2440	-	O/P Mon
Spectrum Analyser	Rohde & Schwarz	FSU26	2747	12	02-Feb-2018
Hygrometer	Rotronic	I-1000	3068	12	01-Jun-2018
Thermocouple Thermometer	Fluke	51	3174	12	22-Dec-2017
Hygrometer	Rotronic	I-1000	3220	12	30-Aug-2018
Network Analyser	Rohde & Schwarz	ZVA 40	3548	12	15-Sep-2017
'3.5mm' - '3.5mm' RF Cable (2m)	Rhophase	3PS-1803-2000-3PS	3702	12	13-Dec-2017
Loop Antenna	Solar	7334-1	4215	-	O/P Mon
Calibration Unit	Rohde & Schwarz	ZV-Z54	4368	12	08-Sep-2017
Frequency Standard	Spectracom	Secure Sync 1200-0408-0601	4393	6	09-Sep-2017
Frequency Standard	Spectracom	Secure Sync 1200-0408-0601	4393	6	12-Mar-2018
Climatic Chamber	Aralab	FitoTerm 300E45	4823	-	O/P Mon

Table 12

O/P Mon – Output Monitored using calibrated equipment

3 Measurement Uncertainty

For a 95% confidence level, the measurement uncertainties for defined systems are:

Test Name	Measurement Uncertainty
20 dB Bandwidth	± 0.003 kHz
Field Strength of any Emission	9 kHz to 30 MHz: ± 3.4 dB 30 MHz to 1 GHz: ± 5.1 dB
Frequency Tolerance Under Temperature Variations	± 12.53 Hz

Table 13