Timco Test Report # TR_3429-20_FCC_MPE_1
Revision: 1
Issue Date: September 24, 2020
Final Test Date: September 23, 2020

ACCREDITED
CERT #0955.01

TIMCO ENGINEERING, Inc.
An IIA Company

Test Report - FCC PART 1.1310 / MPE
Prepared For: Ness Corporation Pty. Ltd.

Approved for Release By:

Signature: Bruno Clavier

Name & Title: Bruno Clavier, General Manager
Date of Signature (YYYY-MM-DD): 2020-10-02

Table of Contents

1. Customer Information

Applicant: Ness Corporation Pty. Ltd.
Address: 4/167 Prospect Highway
Seven Hills, Sydney NSW 2147

2. Location of Testing

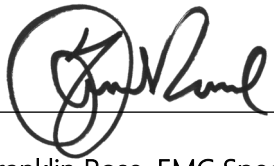
2.1 Test Laboratory

Timco Engineering Inc. is a subsidiary of Industrial Inspection & Analysis, Inc. ("IIA"). Testing was performed at Timco's permanent laboratory located at 849 NW State Road 45, Newberry, Florida 32669

FCC test firm # 578780
FCC Designation # US1070
FCC site registration is under A2LA certificate # 0955.01
ISED Canada test site registration # 2056A
EU Notified Body # 1177
For all designations see A2LA scope # 0955.01

2.2 Testing was performed, reviewed by

Dates of Testing: September 21 - 23, 2020

Signature: 

Name & Title: Franklin Rose, EMC Specialist
Date of Signature
(YYYY-MM-DD): 2020-09-24

Signature: 

Sr. EMC Engineer
EMC-003838-NE

Name & Title: Tim Royer, EMC Engineer
Date of Signature
(YYYY-MM-DD): 2020-09-24

3. Test Sample(s) (EUT/DUT)

The test sample was received: June 12, 2020

3.1 Description of the EUT

A description as well as unambiguous identification of the EUT(s) tested. Where more than one sample is required for technical reasons (such as the use of connected units for the purpose of conducted output power testing where the product units will have integral antennas), each specific test shall identify which unit was tested.

Identification	
FCC ID:	O2K-TR915
Brief Description	Universal Pendant KeyFob
Type of Modular	n/a
Model(s) #	TR915
Trade name	Universal Pendant
Firmware version	1.0
Software version	n/a
Serial Number	n/a

Technical Characteristics	
Technology	DSS/FHSS
Frequency Range	903 – 927 MHz
RF O/P Power (Max.)	14.3 dBm
Modulation	GFSK
Bandwidth & Emission Class	269.23 kHz, F1D
Number of Channels	25
Duty Cycle	13.54%
Antenna Type	Integrated
Antenna Gain (for each ant.)	0 dBi
Antenna Connector	N/A
Voltage Rating (AC or Batt.)	Battery 1.5 V

Antenna Characteristics		
Frequency Range	Mode / BW	Antenna Gain
902-928 MHz	n/a	0 dBi

4. Test methods & Applicable Regulatory Limits

4.1 Test methods/Standards/Guidance:

The following guidance FCC KDB 447498 D01 General RF Exposure Guidance v06 was used for RF exposure evaluation as per FCC Part 1.1310 and FCC Part 2.1091 and part 2.1093. Full test results are available in this report.

4.1.1 FCC Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging Time (minutes)
A Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*(100)	≤6
3.0-30	1842/f	4.89/f	*($900/f^2$)	<6
30-300	61.4	0.163	1.0	<6
300-1,500			f/300	<6
1,500-100,000			5	<6
B Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	<30
1.34-30	824/f	2.19/f	*($180/f^2$)	<30
30-300	27.5	0.073	0.2	<30
300-1,500			f/1500	<30
1,500-100,000			1.0	<30

4.2 Equations

POWER DENSITY

E(V/m) = SQRT (30 * P * G) / d

Pd(W/m^2) = E^2 / 377

S = EIRP / (4 * Pi * D^2v)

Where:

S = Power density, in mW/cm^2
EIRP = Equivalent Isotropic Radiated Power, in mW
D = Separation distance in cm

Power density is converted from units of mW/cm^2 to units of W/m^2 by multiplying by 10.

DISTANCE

D = SQRT (EIRP / (4 * Pi * S))

Where:

D = Separation distance in cm
EIRP = Equivalent Isotropic Radiated Power, in mW
S = Power density in mW/cm^2

SOURCE-BASED DUTY CYCLE (When applicable (for example, multi-slot mobile phone applications) A duty cycle factor may be applied.)

Source-based time-average EIRP = (DC / 100) * EIRP

Where:

DC = Duty Cycle in % as applicable.
EIRP = Equivalent Isotropic radiated Power, in mW

5. RF Exposure Results

Frequency Band	Separation Distance (mm)	Max Power + Tolerance (dBm)	Max Power + Tolerance (mW)	SAR Exclusion Value	Limit for 1-g SAR	Limit for 10-g SAR (Extremeties)	SAR Exclusion
903-927 MHz	5	14.30	26.92	5.18	3.0	7.5	SAR EXEMPT FOR EXTREMITIES

6. History of Test Report Changes

Test Report #	Revision #	Description	Date of Issue
TR_3429-20_FCC_MPE_1	1	Initial release	September 24, 2020

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END OF TEST REPORT