



An IIA Company

Test Report - FCC PART 1.1310 / MPE

Prepared For: Rider Alert Technology, LLC

Approved for Release By:

Signature: Bruno Clavier

Name & Title: Bruno Clavier, General Manager

Date of Signature

(YYYY-MM-DD): 2020-11-03

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Timco Engineering, Inc., an IIA Company
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1. Customer Information

Applicant: Rider Alert Technology, LLC

Address: 114 Holly Avenue

Staten Island NY 10308

Contact: Michael Grant

Telephone: 201-577-2741

Email address: mgrant128@yahoo.com

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



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2.2 Testing was performed, reviewed by

Dates of Testing: June 12 – September 18, 2020

Signature:

A handwritten signature of Franklin Rose in black ink.

Name & Title: Franklin Rose, EMC Specialist

Date of Signature

(YYYY-MM-DD): 2020-11-3

A handwritten signature of Tim Royer in black ink.

Sr. EMC Engineer
EMC-003838-NE

A circular logo with "CERTIFIED" at the top, "iMARIE" in the center, and "ENGINEER" at the bottom. The "i" in "iMARIE" is stylized with a small circle.

Signature:

Name & Title: Tim Royer, EMC Engineer

Date of Signature

(YYYY-MM-DD): 2020-11-3



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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:	2AXDXRAT286
Brief Description	DTS MODULE
Type of Modular	n/a
Model(s) #	RAT143
Trade name	n/a
Firmware version	n/a
Software version	n/a
Serial Number	n/a

Technical Characteristics	
Technology	GFSK
Frequency Range	915
RF O/P Power (Max.)	6.42 dBm
Modulation	GFSK
Bandwidth & Emission Class	717.7 kHz, F1D
Number of Channels	1
Duty Cycle	100%
Antenna Type	Trace/Wafer antenna
Antenna Gain (for each ant.)	0 dBi
Antenna Connector	N/A
Voltage Rating (AC or Batt.)	Battery

Antenna Characteristics		
Frequency Range	Mode / BW	Antenna Gain
915	n/a	0 dBi



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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



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4.2 Equations

POWER DENSITY

$$E(V/m) = \text{SQRT} (30 * P * G) / d$$

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

$$S = \text{EIRP} / (4 * \pi * D^{2v})$$

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

$$D = \text{SQRT} (\text{EIRP} / (4 * \pi * S))$$

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.)

$$\text{Source-based time-average EIRP} = (DC / 100) * \text{EIRP}$$

Where:

DC = Duty Cycle in % as applicable.

EIRP = Equivalent Isotropic radiated Power, in mW



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5. General Uncontrolled Exposure RF Exposure Results

Transmitter Type: DTS MODULE

Separation Distance: 20 cm

Freq. band	Separation Distance (cm)	O/P (dBm)	Antenna Gain (dBi)	Duty Cycle (%)	EIRP (mW)	PD (mW/cm ²)	LIMIT mW/cm ²)
915	20	6.42	1	100	4.4	0.02757	0.61

RESULT: Pass at DISTANCE 20cm

6. General Controlled Exposure RF Exposure Results

Transmitter Type: DTS MODULE

Separation Distance: 20 cm

Freq. band	Separation Distance (cm)	O/P (dBm)	Antenna Gain (dBi)	Duty Cycle (%)	EIRP (mW)	PD (mW/cm ²)	LIMIT mW/cm ²)
915	20	6.42	1	100	4.4	0.02757	3.05

RESULT: Pass at DISTANCE 20cm



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7. History of Test Report Changes

Test Report #	Revision #	Description	Date of Issue
TR_3429-20_FCC_MPE_1	1	Initial release	October 2, 2020
	2	Revised page 5	November 6, 2020



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END OF TEST REPORT
