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Federal Communications Commission  
Authorization and Evaluation Division  
Equipment Authorization Branch  
7435 Oakland Mills Road  
Columbia, MD 21046

## **Applicant's declaration concerning RF Radiation Exposure**

We hereby indicate that the product

**Product Description:** 915Mz Transceiver Module

**Model No:** PN17TR

The equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. The integral antennas used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter within the host device.

A safety statement concerning minimum separation distances from enclosure of the

**Product:** 915Mz Transceiver Module

will be integrated in the user's manual to provide end-users with transmitter operating conditions for satisfying RF exposure compliance.

The appropriate information can be drawn from the [test report no: W6M21911-19492-C-1](#)

and the accompanying calculations.

**Company:** Inventis Technology Pty Limited

**Address:** Unit 4, 2 Southridge Street

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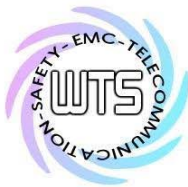
Australia

**Date:** 12 Nov 2019

**Signature**

A handwritten signature in black ink, appearing to read 'Jeffry P. Stone', is written over a horizontal line.

Jeffry Stone  
General Manager  
Inventis Technology Pty Limited



Registration number: W6M21911-19492-C-1

FCC ID: 2ACT2-PN17TR

## 3.2 Equivalent Isotropic Radiated Power (EIRP)

FCC Rule: 15.247(b)(3)

### Dipole Antenna

EIRP = max. conducted output power + antenna gain

EIRP = 8.57 dBm + (5 dBi [antenna gain claimed by manufacturer]) = 13.57 dBm = 22.75 mW

### Helical Antenna

EIRP = max. conducted output power + antenna gain

EIRP = 8.45 dBm + (2.15 dBi [antenna gain claimed by manufacturer]) = 10.60 dBm = 11.48 mW

Test equipment used: ETSTW-RE 055

## 3.3 Exemption Limits for Routine Evaluation according to 47 CFR FCC Part 2 Subpart J, section 2.1091

FCC OET Bulletin 65 Edition 97.01 determines the equations for predicting RF fields and applicable limits.

The prediction for power density in the far-field but will over-predict power density in the near field, where it could be used for walking a “worst case” or conservative prediction.

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 20 cm normally can be maintained between the user and the device.

### MPE Calculation Method

#### (A) Limits for Occupational/Controlled Exposure

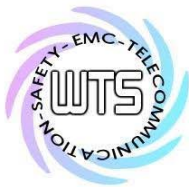
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f <sup>2</sup> )*	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6

#### (B) Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f <sup>2</sup> )*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

f = frequency in MHz

\*Plane-wave equivalent power density



# **Worldwide Testing Services(Taiwan) Co., Ltd.**

Registration number: W6M21911-19492-C-1

FCC ID: 2ACT2-PN17TR

E = Electric field (V/m) P = output power (W) G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to  $P_d = \frac{30 \times P \times G}{377 \times d^2}$  mW/cm<sup>2</sup>.

## **Master Device**

Established separation distance is 20 cm.

Operating frequency band: 915 MHz

The product meets RF exposure requirement.

Because the power density of 0.0045 mW/cm<sup>2</sup> at 915 MHz is below the power density limit of 0.61 mW/cm<sup>2</sup>.

## **PN15RC**

Established separation distance is 20 cm.

Operating frequency band: 915 MHz

The product meets RF exposure requirement.

Because the power density of 0.0023 mW/cm<sup>2</sup> at 915 MHz is below the power density limit of 0.61 mW/cm<sup>2</sup>.

Limits:

<b>Limit for General Population / Uncontrolled Exposure</b>	
Frequency (MHz)	Power Density (mW/cm <sup>2</sup> )
915	0.61