

# TEST REPORT

of

## AS/NZS 2772.2:2016 Amd 1:2018

Product : **Lora module**  
Model(s): **Fanstel**  
Brand: **LR62E**  
Model Difference: **N/A**  
Applicant: **Fanstel Corporation, Taipei**  
Address: **10F-10, No. 79, Sec. 1, Hsin Tai Wu Rd., Hsi-Chih,  
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Test Performed by:



**International Standards Laboratory Corp. LT Lab.**

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Report No.: **ISL-20LR171AMPE**

Issue Date : **2021/12/07**



Test results given in this report apply only to the specific sample(s) tested and are traceable to national or international standard through calibration of the equipment and evaluating measurement uncertainty herein. The uncertainty of the measurement does not include in consideration of the test result unless the customer required the determination of uncertainty via the agreement, regulation or standard document specification. This test report shall not be reproduced except in full, without the written approval of International Standards Laboratory Corp.

## VERIFICATION OF COMPLIANCE

**Applicant:** Fanstel Corporation, Taipei  
**Equipment Under Test:** Lora module  
**Brand Name:** Fanstel  
**Model Number:** LR62E  
**Model Different:** N/A  
**Date of Test:** 2021/11/24 ~ 2021/12/06  
**Date of EUT Received:** 2021/11/24

APPLICABLE STANDARDS	
STANDARD	TEST RESULT
AS/NZS 2772.2:2016 Amd 1:2018	Complied

The above equipment was tested by International Standards Laboratory Corp. for compliance with the requirements set forth in the Australian/New Zealand Standard AS/NZS 2772.2:2016. The results of in this report apply to the product system that was used only. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

**Test By:**

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**Date:**

2021/12/07

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## Version

Version No.	Date	Description
00	2021/12/07	Original Issue

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## 1. Description of Equipment under Test (EUT)

General Information	
Product Name:	Lora module
Brand Name:	Fanstel
Model Name:	LR62E
Model Difference:	N/A
Temperature Range	-40°C to +105°C
Power Supply:	5Vdc from USB (JIG)
LoRa Information	
Frequency Range:	915.5MHz – 927.5MHz
Transmit Power (EIRP):	12.29 dBm
Channel number:	13 channels
Antenna Designation:	Dipole Antenna : 1.39dBi (Max)

**Remark:** The above DUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

## 2. General Description of Applied Standards

The EUT According to the Specifications, it must comply with the requirements of the following standards:

AS/NZS 2772.2:2016 Amd 1:2018 – Radiofrequency fields Part 2: Principles and methods of measurement and computation—3 kHz to 300 GHz.

## 3. MPE Limit

According AS/NZS 2772-2 Section I2.3.

The Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), an agency of the (Australian) Commonwealth Department of Health, has established a Radiation Protection Standard specifying limits for continuous exposures of the general public of RF fields, shown in Table II.

**TABLE II**  
**REFERENCE LEVELS FOR TIME AVERAGED EXPOSURE**  
**TO RMS ELECTRIC AND MAGNETIC FIELDS (UNPERTURBED)**

Exposure	Frequency range	<i>E</i> -field strength V/m rms	<i>H</i> -field strength A/m rms	Power flux density W/m <sup>2</sup>
Occupational (RF worker)	100 kHz–1 MHz	614	1.63/f	N/A
	1 MHz–10 MHz	614/f	1.63/f	1000/f <sup>2</sup>
	10 MHz–400 MHz	61.4	0.163	10
	400 MHz–2 GHz	$3.07 \times f^{0.5}$	$0.00814 \times f^{0.5}$	$f/40$
	2 GHz–300 GHz	137	0.364	50
Non-occupational (general public)	100 kHz–150 kHz	86.8	4.86	N/A
	150 kHz–1 MHz	86.8	0.729/f	N/A
	1 MHz–10 MHz	$86.8/f^{0.5}$	0.729/f	N/A
	10 MHz–400 MHz	27.4	0.0729	2.0
	400 MHz–2 GHz	$1.37 \times f^{0.5}$	$0.00364 \times f^{0.5}$	$f/200$
	2 GHz–300 GHz	61.4	0.163	10.0

## 4. RF Exposure Evaluation

### 4.1 Classification of the assessment method

#### Far Field Calculation Formula

$$E = \frac{\sqrt{30PG(\theta, \phi)}}{r}$$

$G$  = antenna gain relative to an isotropic antenna  
 $\theta, \phi$  = elevation and azimuth angles to point of investigation  
 $r$  = distance from observation point to the antenna

### 4.2 Maximum Power Density Result

Distance ( $r$ ): 20 cm

Mode	Frequency Band (MHz)	Max. EIRP (dBm)	Max. EIRP (W)	Field Strength (V/m)	Field Strength Limit (V/m)	Result
LoRa	915.5-927.5	12.29	0.01694	3.565	61.4	Pass

~ End of Report ~