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RF Exposure Evaluation Report

APPLICANT	TAIT LIMITED
	535 Wairakei Road P.O. Box 1645 Christchurch 8140 New Zealand
FCC ID	CASTMBC0A
MODEL NUMBER	TMBC0A
PRODUCT DESCRIPTION	25W MOBILE TRANSCEIVER
STANDARD APPLIED	CFR 47 Part 2.1091
PREPARED BY	Tim Royer

We, TIMCO ENGINEERING, INC. would like to declare that the device has been evaluated in accordance with 47 CFR Part 2.1091 and meets the requirements.

GENERAL REMARKS

Attestations

This equipment has been evaluated in accordance with the standards identified in this report. To the best of my knowledge and belief, these evaluations were performed using the procedures described in this report.

I attest that the necessary evaluations were made, under my supervision, at:

Timco Engineering Inc.
849 NW State Road 45
Newberry, FL 32669

Authorized Signatory Name:

Tim Royer, Engineer

Date: 8/15/2017

RF Exposure Requirements

General information

Device type: 25W MOBILE TRANSCEIVER

Antenna

The manufacturer does not specify an antenna, but a typical antenna has a gain of 0 dBi.

Configuration	Antenna p/n	Type	Max. Gain (dBi)
Fixed mounted	Any	External mounted	5.15

MPE Calculation:

The minimum separation distance is calculated as follows:

$$E(V/m) = \frac{\sqrt{30 \times P \times G}}{d} \qquad \text{Power density: } P_d(mW/cm^2) = \frac{E^2}{3770}$$

The limit for general uncontrolled exposure environment is shown in FCC rule Part 1.11310, Table 1.

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Minimum Separation Distance for Mobile or Fixed Devices
General Population/Uncontrolled Exposure

Insert values in yellow highlighted boxes to determine Minimum Separation Distance

Max Power	25.3	W	*equals*	Max Power	25300	mW
Duty Cycle	50	%	*equals*	Duty Factor	0.5	numeric
Antenna Gain	5.15	dBi	*equals*	Gain numeric	3.273407	numeric
Coax Loss	0	dB		Gain - Coax Los	3.273407	numeric
Power Density	0.2	mW/cm^2				

Enter power Density from the chart to the right

Frequency 222 MHz

Rule Part 1.1310, Table 1 (B)

Frequency rang	Power den	Enter this value
MHz	**mW/cm^2**	**mW/cm^2**
0.3-1.34	100	**100**
1.34-30	$180/f^2$	**0.0**
30-300	0.2	**0.2**
300-1,500	f/1500	**0.1**
1,500-100,000	1	**1**

f = frequency in MHz

Minimum Separation Distance	**128 cm**	**1.28 m**

Minimum Seperation in Inches 50.49632 Inches

Applicant: TAIT LIMITED
FCC ID: CASTMBC0A
Report: 1424AUT17RF Exp MPE Rpt.docx