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TIMCO ENGINEERING, Inc.

An IIA Company

RF Exposure Evaluation Report

APPLICANT	CATTRON NORTH AMERICA INC.
ADDRESS	655 N. RIVER ROAD NW SUITE A WARREN, OH 44483-2254 USA
FCC ID	CN290275
IC	1007A-90275
MODEL NUMBER	90275 TRX
PRODUCT DESCRIPTION	IR LRMII 900 MHZ/2400MHZ MODULE
FINAL TEST DATE	3/13/2020
PREPARED BY	Tim Royer
TEST RESULTS	☒ PASS ☐ FAIL

Report Number	Report Version	Description	Issue Date
519AUT20 MPETestReport_	Rev1	Initial Issue	5/26/2020

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GENERAL REMARKS

Summary

The device under test does:

☒ Fulfill the general approval requirements as identified in this test report and was selected by the customer.

☐ Not fulfill the general approval requirements as identified in this test report

Attestations

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

All instrumentation and accessories used to test products for compliance to the indicated standards are calibrated regularly in accordance with ISO 17025 requirements.

I attest that the necessary measurements were made at:

Timco Engineering Inc.
849 NW State Road 45
Newberry, FL 32669
Designation #: US1070

Prepared by:

Name and Title	Tim Royer, Project Manager / EMC Engineer
Date	5/26/2020

GENERAL INFORMATION

EUT Description	IR LRMII 900 MHZ/2400MHZ MODULE		
Model Number	90275 TRX		
EUT Power Source	☒110–120Vac, 50–60Hz	☒ DC Power (3.3 VDC)	☐ Battery Operated
Test Item	☐ Engineering Prototype	☒ Pre-Production	☐ Production
Type of Equipment	☒ Fixed	☐ Mobile	☐ Portable
Antenna Connector	Internal		
Test Conditions	The temperature was 26ºC Relative humidity of 50%.		
Modification to the EUT	No Modification to EUT.		
Applicable Standards	FCC CFR 47 Part 2.1091		
Test Facility	Timco Engineering Inc. at 849 NW State Road 45 Newberry, FL 32669 USA. Designation #: US1070		

ANTENNA INFORMATION

Antenna is Provided	Type	Max Gain (dBi)
No	n/a	**0.0**

RF POWER OUTPUT

Tuned Frequency (MHz)	Power Output (dBm)	Power Output (mW)
902.1	-4.82	0.33

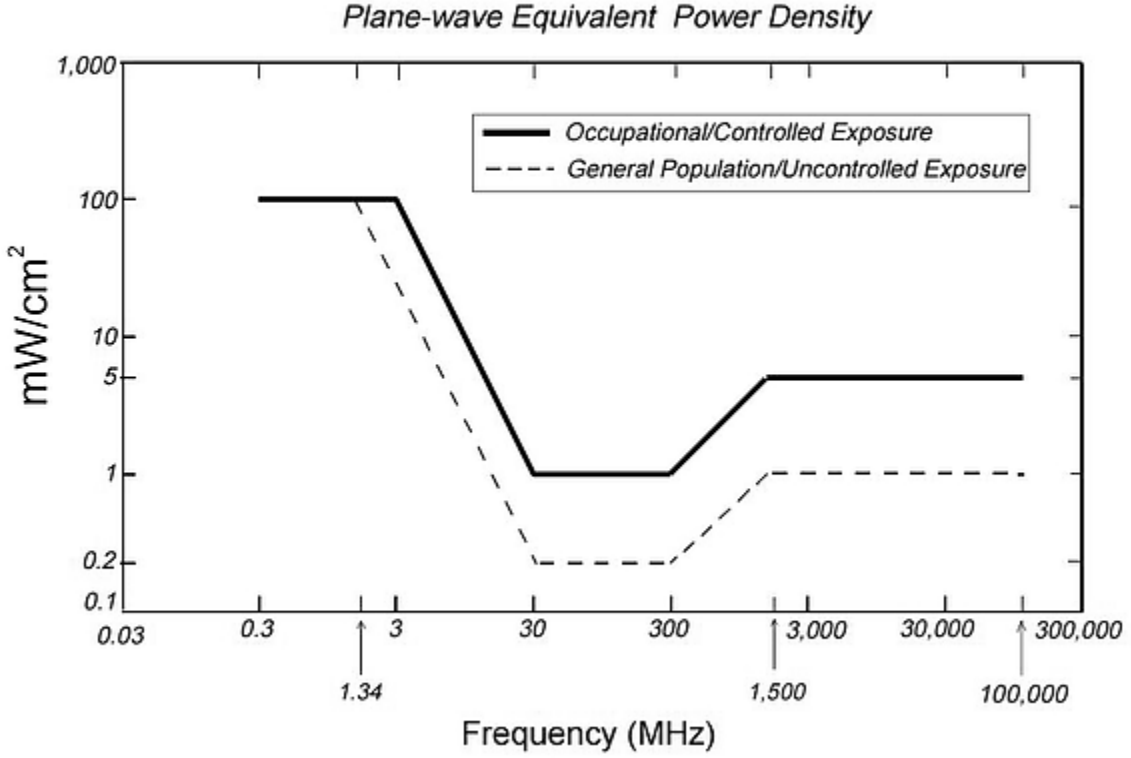
MPE CALCULATION

The minimum separation distance is calculated as follows:

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

MPE LIMITS

Figure 1. *FCC Limits for Maximum Permissible Exposure (MPE)*



Table

KDB 447498 D01 General RF Exposure Guidance v05r02				
4.3.1. Standalone SAR test exclusion considerations				
100 MHz to 6 GHz at separation distance less than or equal to 50 mm				
SAR Test Exclusion Calculator for Portable Devices				
Insert values in yellow highlighted boxes to determine SAR Exclusion				
Max Power	0.33	mW		
Min Separation	5	mm	**When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.**	
Frequency	0.9021	GHz		
Answer	**0.06**	**Must be less than or equal to 3.0 for SAR Exclusion**	**7.5 for extremities**	
	KDB 388624 D02Permit But Ask List v15r03, Item II. A. 5.			
	PBA is required if:			
	General Population: The Answer is equal to or greater than 24 (8x threshold)			
	Controlled Use: The Answer is equal to or greater than 60 (20x threshold)			
	and, when published RF exposure KDB procedures are not established for SAR testing or when SAR data is not provided to support compliance.			
Please also note the following: *[FCC KDB quote]* These test exclusion conditions are based on source-based time-averaged maximum conducted output power of the RF channel requiring evaluation, adjusted for tune-up tolerance, and the minimum test separation distance required for the exposure conditions. The minimum test separation distance is determined by the smallest distance from the antenna and radiating structures or outer surface. *[End quote]*				