



RF Exposure Evaluation Report

APPLICANT	WISYCOM
ADDRESS	VIA SPIN, 156 ROMANO D'EZZELINO (VI) 36060 ITALY
FCC ID	POUMTK952N-OW2
IC	11967A-MTK952N0W2
MODEL NUMBER	MTK952N-OW2-US, MTK952N-OW2-US_MS, MTK952N-OW2-US_DC, MTK952N-OW2-US_MS-DC
PRODUCT DESCRIPTION	DUAL TRANSMITTER WITH/WITHOUT COMBINER
DATE SAMPLE RECEIVED	09/17/2018
FINAL TEST DATE	09/20/2018
PREPARED BY	Franklin Rose
TEST RESULTS	<input checked="" type="checkbox"/> PASS <input type="checkbox"/> FAIL

Report Number	Report Version	Description	Issue Date
1512IC18 MPE_TestReport_	Rev1	Initial Issue	10/31/2018
1512IC18 MPE_TestReport_	Rev2	Revised Antenna Gain and Cable Loss values	01/15/2019
1512IC18 MPE_TestReport_	Rev3	Updated Power Denisty	01/16/2019

THE ATTACHED REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN APPROVAL OF TIMCO ENGINEERING, INC.

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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	Franklin Rose, Project Manager / EMC Testing Technician
Date	10/31/2018

GENERAL INFORMATION

EUT Description	DUAL TRANSMITTER WITH/WITHOUT COMBINER
Model Number	MTK952N-0W2-US, MTK952N-0W2-US_MS, MTK952N-0W2-US_DC, MTK952N-0W2-US_MS-DC
EUT Power Source	<input checked="" type="checkbox"/> 110–120Vac/50– 60Hz
	<input type="checkbox"/> DC Power (12.0 V)
	<input type="checkbox"/> Battery Operated Exclusively
Test Item	<input type="checkbox"/> Prototype
	<input checked="" type="checkbox"/> Pre-Production
	<input type="checkbox"/> Production
Type of Equipment	<input checked="" type="checkbox"/> Fixed
	<input type="checkbox"/> Mobile
	<input type="checkbox"/> Portable
Antenna Connector	BNC
Test Conditions	The temperature was 26°C Relative humidity of 50%.
Modification to the EUT	None
Applicable Standards	FCC CFR 47 Part 2.1091, RSS-102 (i5)
Test Facility	Timco Engineering Inc. at 849 NW State Road 45 Newberry, FL 32669 USA. Designation #: US1070

ANTENNA INFORMATION

Manufacturer Provides Antenna	Type	Max Gain (dBi)
No	n/a	5.0

CABLE LOSS INFORMATION

Source of Loss	Type	Max loss (dB)
RF Signal Combiner	Wiscom CSA121T Combiner	8.04

MPE CALCULATION

The minimum separation distance is calculated as follows:

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

1. **FCC 2.1091: General Uncontrolled Exposure Environment:** The limit for General Uncontrolled Exposure Environment is calculated as shown in 1.1310, Table 1.

Variable	Value
Frequency (MHz)	470.075
Max Power	0.0457 W
Duty Cycle (at full power)	100%
Max Antenna Gain	5.0 dBi
Coax Loss	8.04 dBm
Power Density	0.313 mW/cm ²
Minimum Separation Distance	20 cm

2. **Canada RSS-102: General Uncontrolled Exposure Environment:** The limit for General Uncontrolled Exposure Environment is calculated as shown in RSS-102.

Variable	Value
Frequency (MHz)	470.075
Max Power	0.0457 W
Duty Cycle (at full power)	100%
Max Antenna Gain	5.0 dBi
Coax Loss	8.04 dBm
Power Density	1.7551 W/m ²
Minimum Separation Distance	20 cm