PHONE: 888.472.2424 OR 352.472.5500 EMAIL: <u>INFO@TIMCOENGR.COM</u>

WEB: <u>HTTP://WWW.TIMCOENGR.COM</u>



RF Exposure Evaluation Report

APPLICANT	STANDARD COMMUNICATIONS PTY.LTD.			
ADDRESS	PO BOX 96 WINSTON HILLS NSW 2153 AUSTRALIA			
FCC ID	TXJCM60UL25			
MODEL NUMBER	CM60-UL25B			
PRODUCT DESCRIPTION	UHF MOBILE TRANSCEIVER			
DATE SAMPLE RECEIVED	4/11/2018			
FINAL TEST DATE	4/27/2018			
PREPARED BY	Franklin Rose			
TEST RESULTS	□ PASS □ FAIL			

Report Number	ort Number Report Version Description		Issue Date
484AUT18 MPE_TestReport_	Rev1	Initial Issue	05/01/2018

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 05/01/2018

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GENERAL INFORMATION

EUT Description	UHF MOBILE TRANSCEIVER		
Model Number	CM60-UL25B		
	☐ 110-120Vac/50- 60Hz		
EUT Power Source	☑ DC Power (13.8 V)		
	☐ Battery Operated Exclusively		
	☐ Prototype		
Test Item	□ Pre-Production		
	☐ Production		
	Fixed		
Type of Equipment	⊠ Mobile		
	☐ Portable		
Antenna Connector	BNC		
Test Conditions	The temperature was 26°C Relative humidity of 50%.		
Modification to the EUT	No Modification to EUT.		
Applicable Standards	Standards FCC CFR 47 Part 2.1091		
Test Facility	Timco Engineering Inc. at 849 NW State Road 45 Newberry, FL 32669 USA.		
	Designation #: US1070		

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ANTENNA INFORMATION

Manufacturer Provided Antenna	Туре	Max Gain (dBi)
No	Not specified.	2.15
No	Not specified.	5.15

MANUFACTURER'S STATEMENT

The following excerpt was taken from the CM60 Service Manual:

Radio Frequency Exposure Control

This radio emits RF (Radio Frequency) energy or radio waves when transmitting. RF energy is one of many forms of electromagnetic energy including sunlight and electricity. The FCC Radio Frequency exposure guidelines include recommendations on the safe levels of exposure for workers and the general public with a significant margin of protection.

To comply with FCC exposure limits the radio must be installed using an externally mounted antenna with a gain of either 2.15 dBi or 5.15 dBi. The antenna must be mounted centrally on the roof of the vehicle in a location that ensures a minimum safe distance of 35 inches (0.9 m) from people.

For further information on RF energy exposure and how to control it, please visit the following website. www.fcc.gov/oet/rfsafety/rf-faqs.html

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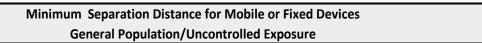
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MPE CALCULATION

The minimum separation distance is calculated as follows:

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

The limit for general uncontrolled exposure environment is shown in FCC rule Part 1.1310, Table 1.



Insert values in yellow highlighted boxes to determine Minimum Separation Distance					
Max Power	25 W	equals	Max Power	25000	mW
Duty Cycle	<mark>50</mark> %	equals	Duty Factor	0.5	numeric
Antenna Gain	5.15 dBi	equals	Gain numeric	3.273407	numeric
Coax Loss	0 dB		Gain - Coax Loss	3.273407	numeric
Power Density	0.3 mW/cm ²			-	
Enter power Density from the chart to the right Rule Part 1.1310, Table 1 (B)					
Frequency	480 MHz		Frequency range Power der 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	0.3
			1,500-100,000	1	1
f = frequency in MHz					

Minimum Separation Distance	104.2 cm	1.042 m
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