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FCC PART 15.109

RADAR DETECTOR REPORT

Applicant	COBRA ELECTRONICS CORPORATION
Address	6500 WEST CORTLAND STREET CHICAGO, IL 60707
Product Model Number	1/23/2017
Product Description	RAD350A, RAD400
FCC ID:	BBO2016B
Date Sample Received	1/23/2017
Date Tested	1/25/2017
Tested By	Tim Royer
Approved By	Cory Leverett

Report Number	Version Number	Description	Issue Date
143UT17TestReport_	Rev1	Initial Issue	1/27/2017

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

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GENERAL REMARKS

The attached report shall not be reproduced except in full without the written permission of Timco Engineering Inc.

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

A blue ink signature is written over a circular purple stamp. The stamp contains the text "TIMCO ENGINEERING, INC." around the perimeter and "TESTING ENGINEER" in the center.

Tested by:

Name and Title: Tim Royer, Project Manager/Testing Engineer

Date: 1 / 25 / 2017

A blue ink signature is written over a circular pink stamp. The stamp contains the text "TIMCO ENGINEERING, INC." around the perimeter and "PROJECT MANAGER" in the center.

Reviewed and approved by:

Name and Title: Cory Leverett, Project Manager

Date: 1 / 27 / 2017

Applicant: COBRA ELECTRONICS CORPORATION
FCC ID: BBO2016B
Report: 143UT17TestReport_Rev1

GENERAL INFORMATION

EUT Specification

EUT Description	RADAR DETECTOR
FCC ID	BBO2016B
Model Number	RAD350A, RAD400
Operating Frequency	10.525GHz(X-Band), 24.150 GHz (K-Band), 33.4-36.0G Hz (Ka Band)
EUT Power Source	<input type="checkbox"/> 110–120Vac/50– 60Hz
	<input checked="" type="checkbox"/> DC Power 12V
	<input type="checkbox"/> Battery Operated Exclusively
Test Item	<input type="checkbox"/> Prototype
	<input type="checkbox"/> Pre-Production
	<input checked="" type="checkbox"/> Production
Type of Equipment	<input type="checkbox"/> Fixed
	<input checked="" type="checkbox"/> Mobile
	<input type="checkbox"/> Portable
Test Conditions	Temperature: 24-26°C Relative humidity: 50-65% Barometric Pressure:30.01"
Modification to the EUT	None
Test Exercise	The EUT was powered with 12V DC and switched on.
Applicable Standards	FCC Pt 15.109
Test Procedure	ANSI C63.4: 2014
Test Facility	Timco Engineering Inc. at 849 NW State Road 45 Newberry, FL 32669 USA.

TEST RESULTS SUMMARY

The test results relate only to the items tested.	
FCC Rules Part No.	RESULTS Pass/ Fail/ NA
15.109 Radiated Emissions	Pass

RADIATED SPURIOUS EMISSIONS

Rules Part No.: 15.109 (h)

Requirements:

Frequency	Average Limit	Peak Limit
11.7 to 12.2GHz	54.0 dB μ V/m measured @ 3 meters	74.0 dB μ V/m measured @ 3 meters

Test Procedure: Standards Listed Above

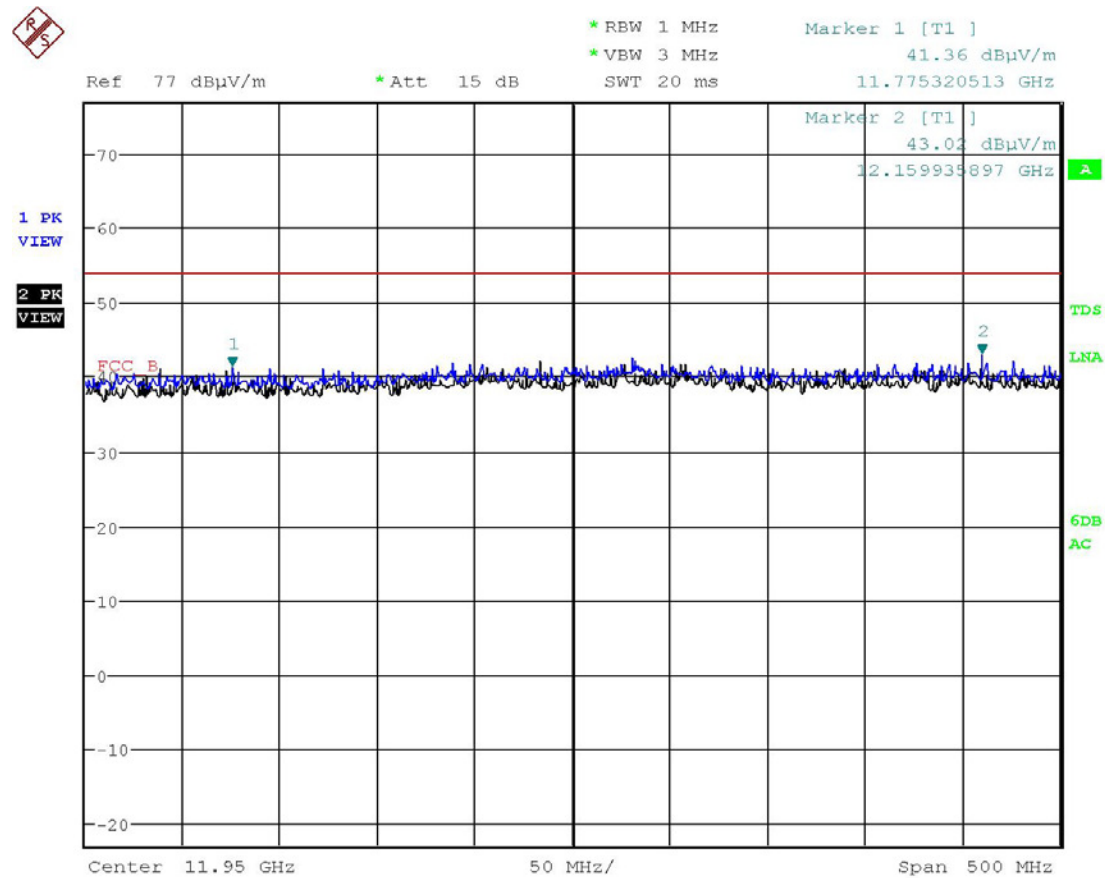
Formula of Conversion Factors: Measurements were performed at 1.5 meter distance; a correction factor was applied to extrapolate to 3 meters. Then the field strength at 3m was established by adding the meter reading of the spectrum analyzer (which is set to read in units of dB μ V) to the antenna correction factor supplied by the antenna manufacturer. The antenna correction factors are stated in terms of dB. The gain of the preselector and preamplifier was accounted for in the spectrum analyzer meter reading.

Example:

Freq. (MHz)	Meter Reading	+ ACF	+ CL	= FS
33	20 dB μ V	+ 10.36 dB/m	+ 0.40 dB	= 30.36 dB μ V/m @ 3m

RADIATED SPURIOUS EMISSIONS

TEST DATA: PEAK PLOT



Date: 25.JAN.2017 14:42:12

Ant Polarity: T1 (Blue) = Vertical, T2 (Black) = Horizontal

Notes:

No emissions were found in excess of the reported noise figures in the plot above.

Results - Meets Requirements

TEST EQUIPMENT LIST

Device	Manufacturer	Model	Serial Number	Cal/ Char Date	Due Date
DC Power Supply	HP	6286A	1744A03842	N/A	N/A
CHAMBER	Panashield	3M	N/A	04/25/16	12/31/17
Antenna: Double-Ridged Horn/ ETS Horn 2	ETS-Lindgren Chamber	3117	00041534	02/25/15	02/25/17
Software: Field Strength Program	Timco	N/A	Version 4.0	N/A	N/A
EMI Test Receiver R & S ESU 40 Chamber	Rohde & Schwarz	ESU 40	100320	04/01/16	04/01/18
Coaxial Cable - Chamber 3 cable set (Primary)	Micro-Coax	Chamber 3 cable set (Primary)	KMKM-0244-01; KMKM-0670-00; KFKF-0198-01	08/09/16	08/09/18
Bore-sight Antenna Positioning Tower	Sunol Sciences	TLT2	N/A	N/A	N/A
Pre-amp	RF-LAMBDA	RLNA00M45GA	NA	01/04/16	01/04/18

* EMI RECEIVER SOFTWARE VERSION

The receiver firmware used was version 4.43 Service Pack 3

END OF TEST REPORT