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FCC PART 15

RADAR DETECTOR REPORT

Applicant	**COBRA ELECTRONICS CORPORATION**
Address	**6500 WEST CORTLAND STREET** **CHICAGO IL 60707** **USA**
FCC ID:	BBODSP9200
Product Description	RADAR DETECTOR W/ BLUETOOTH
Date Sample Received	4/6/2015
Date Tested	4/27/2015
Tested By	Sid Sanders
Approved By	Cory Leverett
Test Results	☒ PASS ☐ FAIL

Report Number	Version Number	Description	Issue Date
644BUT15TestReport.docx	Rev.1	Initial Issue	4/27/2015

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GENERAL REMARKS

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

The test results relate only to the items tested.

Summary

The device under test does:

☒ fulfill the general approval requirements as identified in this test report
☐ 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, under my supervision, at:

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

Authorized Signatory Name:

Engineering Project Manager

Date: 4/28/2015

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GENERAL INFORMATION

The test results relate only to the items tested.	
EUT Description	RADAR DETECTOR W/ BLUETOOTH
FCC ID	BBODSP9200
EUT Power Source	☐ 110–120Vac/50– 60Hz
	☒ DC Power
	☐ Battery Operated Exclusively
Test Item	☐ Prototype
	☒ Pre-Production
	☐ Production
Modifications to EUT	None
Standards	CFR 47 § FCC Part 15, Subpart B,
Test Standards	ANSI C63.4-2003
Test Condition in the laboratory	Temperature: 24-26ºC Relative humidity: 50-65%
Test Facility	Timco Engineering, Inc. 849 NW State Road 45 Newberry, FL 32669 USA.

TEST RESULTS SUMMARY

15.109	PASS
15.107	NA

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RADIATED SPURIOUS EMISSIONS 30 to 1000MHz

Rules Part No.: 15.109

Requirements:

Frequency	Limits
30 – 88	40.0 dBµV/m measured @ 3 meters
80 – 216	43.5 dBµV/m measured @ 3 meters
216 – 960	46.0 dBµV/m measured @ 3 meters
Above 960	54.0 dBµV/m measured @ 3 meters
11.7 to 12.2GHz	54.0 dBµV/m measured @ 3 meters

Test Procedure: A search was made of the spectrum from 30 to 1000MHz and from 11.7 to 12.2GHz. Measurements in the 11.7 to 12.2GHz band were made with a Standard Gain Horn. The measurements in the 11.7 to 12.2GHz band represent the ambient noise levels. The attached plots were made with peak detector with the analyzer in a maximum hold for 2 minutes.

Test Data:

Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity	Coax Loss dB	Correction Factor dB/m	Field Strength dBuV/m	Margin dB
52.82	**26.6**	**V**	**0.35**	**10.03**	**36.99**	**3.01**
86.47	**23.8**	**V**	**0.52**	**9.94**	**34.21**	**5.79**
124.10	**20.0**	**V**	**0.65**	**11.52**	**32.16**	**11.34**
150.00	**18.9**	**H**	**0.72**	**16.30**	**35.93**	**7.57**

* The EUT is operating on the following bands; 10.525GHz(X-Band), 24.150GHz(K-Band), 33.4-36.0GHz(KA Band)

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RADIATED SPURIOUS EMISSIONS in 11.7 to 12.2GHz

Test Method for RADIATION INTERFERENCE: Testing was done in accordance with ANSI C63.4. Section 15.35(b) specifies the use of an average detector in this band. In addition, the peak level of an emission shall not exceed the average limit by more than 20 dB using a minimum Resolution Bandwidth (RBW) of 1 MHz and minimum Video Bandwidth (VBW) OF 3 MHz. The following procedure is designed to determine if there are any spurious emissions from the local oscillator within the band of interest along with any additional spurious emissions caused by other circuitry within the device.

1) Determine the frequency of the peak emission:
   Start Frequency 11.7 GHz
   Stop Frequency 12.2 GHz
   RBW equal to or greater than 1 MHz
   VBW equal to or greater than 1 MHz
   Detector Function Peak
   Maximize the emissions with regards to device orientation, antenna polarization, and antenna height. Sweep the band using Max Hold for a minimum of 2 minutes. Record this frequency for measuring the peak emission. In addition record the frequency of other spurious emissions noted.
2) Determine the peak level of the emission:
   Center Frequency Set to the frequency determined in Step 1 RBW Equal to or greater than 1 MHz VBW Equal to or greater than 1 MHz Detector Function Peak Measure the value of the peak emission using Max Hold for a minimum of 2 minutes. This can be done at zero span or a frequency span where the analyzer does not show a "Measurement Uncalibrated" message. Record the peak value. If the peak measurement is compliant with the average limit an average measurement is not necessary. If the peak value exceeds the average limit by less than 20 dB proceed to Step 3.
3) Determine the average level of the emission:
   Center Frequency Set to the frequency determined in Step 1
   Span Zero
   RBW Equal to or greater than 1 MHz
   VBW Equal to or greater than 10 Hz
   Detector Function Peak
   This measurement uses video averaging and must be done in Linear mode. The analyzer Reference Level is adjusted so that a signal is clearly visible on the screen. Measure the value of the emission using Max Hold for a minimum of 2 minutes. Record this as the average value. Step 2 and Step 3 should be repeated for other spurious emissions.

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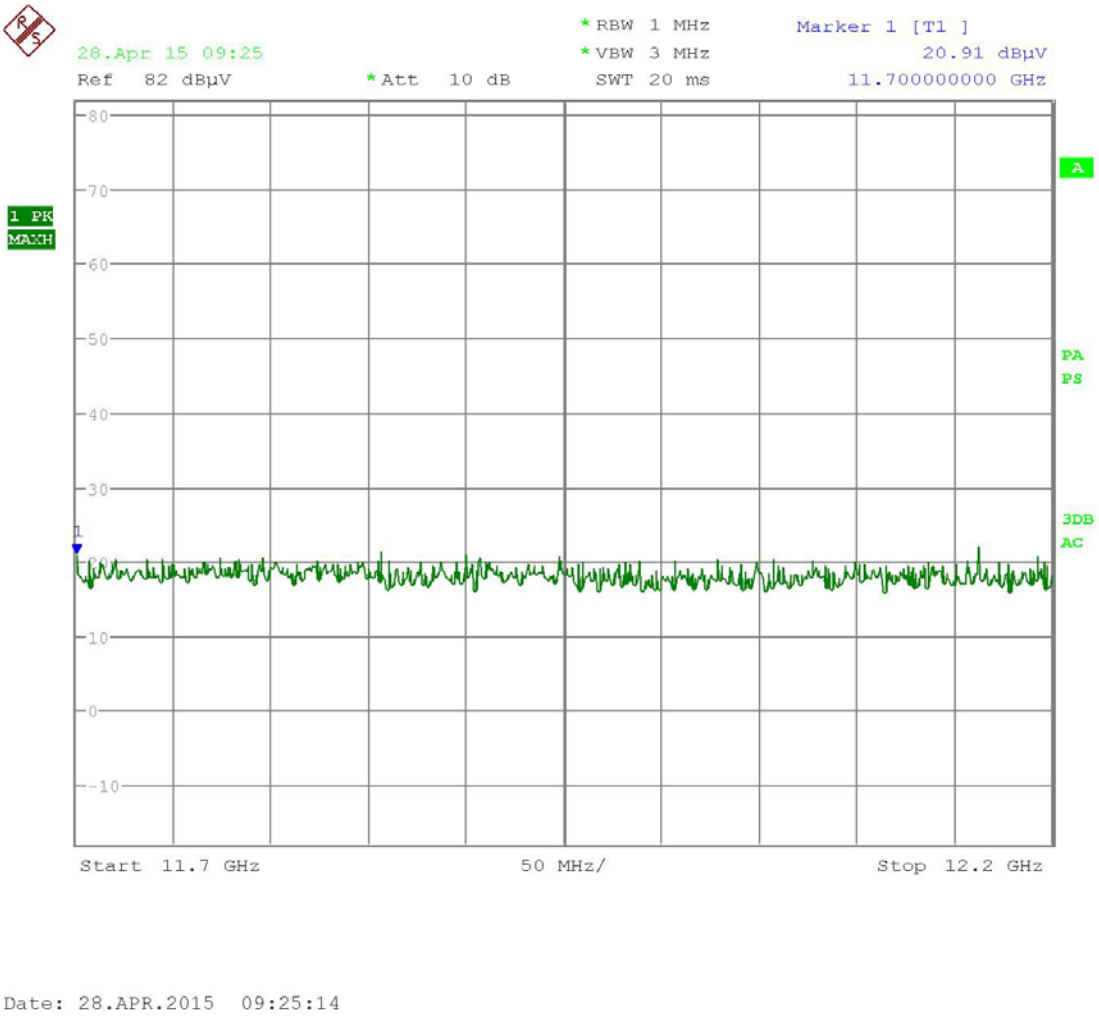
RADIATED SPURIOUS EMISSIONS in 11.7 to 12.2GHz

VERTICAL PLOT



Results - Meets Requirements

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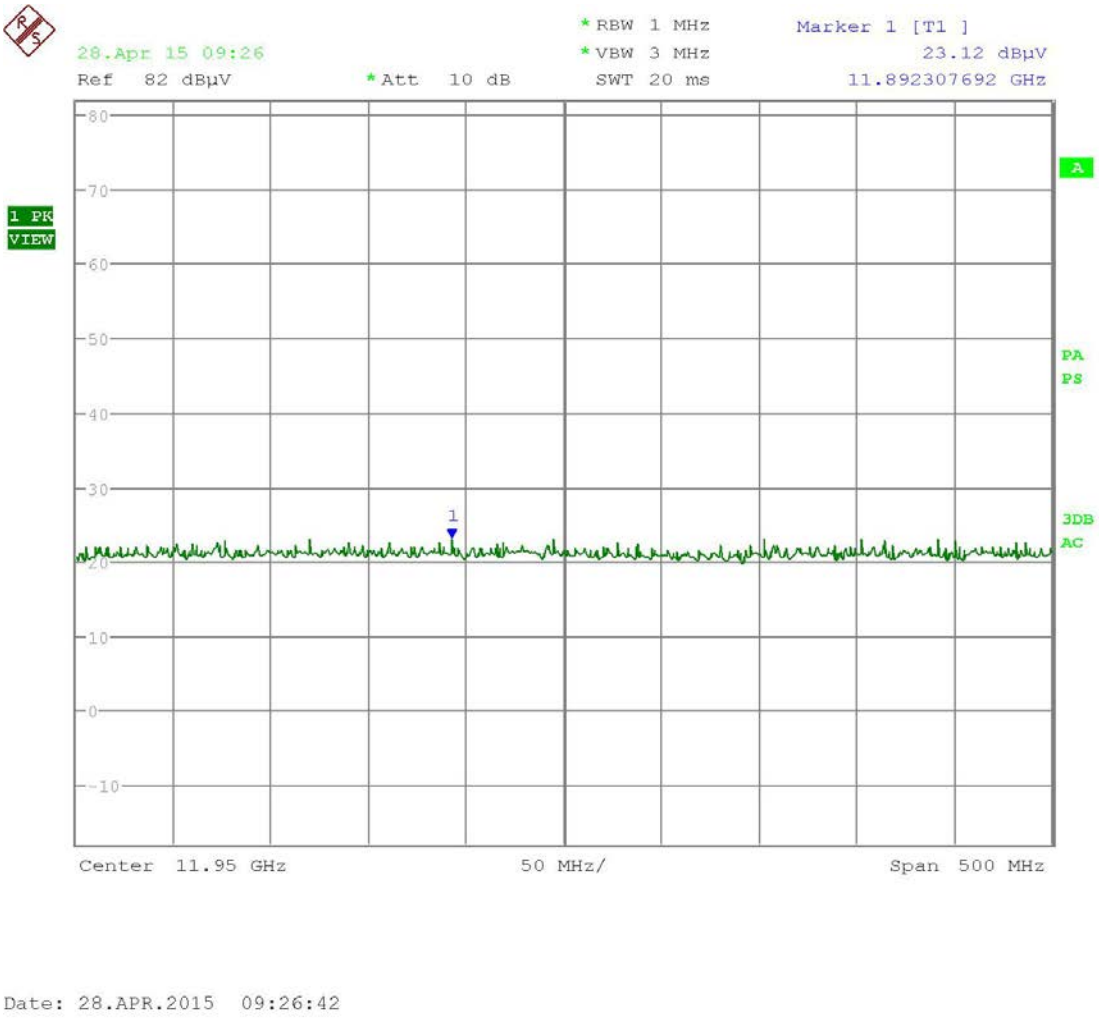
RADIATED SPURIOUS EMISSIONS in 11.7 to 12.2GHz

HORIZANTAL PLOT



Results - Meets Requirements

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TEST EQUIPMENT LIST

Device	Manufacturer	Model	Serial Number	Cal/Char Date	Due Date
Antenna: Biconnical Chamber	Eaton Chamber	94455-1	1057	06/14/13	06/14/15
Antenna: Log-Periodic Chamber	Eaton	96005	1243	05/31/13	05/31/15
3-Meter Semi-Anechoic Chamber	Panashield	N/A	N/A	12/31/13	12/31/15
Antenna: Double-Ridged Horn/ETS Horn 2	ETS-Lindgren	3117	00041534	02/25/15	02/25/17
EMI Test Receiver R & S ESIB 40 Screen Room	Rohde & Schwarz	ESIB 40	100274	08/12/14	08/12/16
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	03/11/14	03/11/16

*EMI RECEIVER SOFTWARE VERSION

The receiver firmware used was version 4.43 Service Pack 3

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