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

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



TABLE OF CONTENTS

GENERAL REMARKS	3
GENERAL INFORMATION	4
TEST RESULTS SUMMARY	4
RADIATED SPURIOUS EMISSIONS 30 to 1000MHz	5
RADIATED SPURIOUS EMISSIONS in 11.7 to 12.2GHz	6
RADIATED SPURIOUS EMISSIONS in 11.7 to 12.2GHz	7
VERTICAL PLOT	7
RADIATED SPURIOUS EMISSIONS in 11.7 to 12.2GHz	8
HORIZANTAL PLOT	8
TEST EQUIPMENT LIST	9



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, FI 32669

Authorized Signatory Name:

Engineering Project Manager

Date: 4/28/2015

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	Temperature: 24-26°C				
the laboratory	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

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	Meter	Ant.	Coax	Correcti	Field	Margin
Frequency	Readin	Polarity	Loss	on	Strengt	dB
MHz	g dBuV		dB	Factor	h	
				dB/m	dBuV/	
					m	
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	н	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)



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.

- Determine the frequency of the peak emission: 1) 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
 - 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.



RADIATED SPURIOUS EMISSIONS in 11.7 to 12.2GHz





RADIATED SPURIOUS EMISSIONS in 11.7 to 12.2GHz



TEST EQUIPMENT LIST

Device	Manufacturer	Model	Serial Number	Cal/Char Date	Due Date
Antenna:	Faton	94455-1	1057	06/14/13	06/14/15
Biconnical	Chamber	, , , , , , , , , , , , , , , , , , , ,			
Chamber					
Antenna:	Eaton	96005	1243	05/31/13	05/31/15
Log-					
Periodic					
Chamber					
3-Meter	Panashield	N/A	N/A	12/31/13	12/31/15
Semi-					
Anechoic					
Chamber					
Antenna:	ETS-Lindgren	3117	00041534	02/25/15	02/25/17
Double-					
Ridged					
Horn/ETS					
Horn 2					
EMI Test	Rohde &	ESIB 40	100274	08/12/14	08/12/16
Receiver R	Schwarz				
& S ESIB					
40 Screen					
Room					
Software:	Timco	N/A	Version	N/A	N/A
Field			4.0		
Strength					
Program					
EMI Test	Rohde &	ESU 40	100320	03/11/14	03/11/16
Receiver R	Schwarz				
& S ESU					
40					
Chamber					

*EMI RECEIVER SOFTWARE VERSION

The receiver firmware used was version 4.43 Service Pack 3