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FCC PART 15.109

RADAR DETECTOR REPORT

Applicant	**COBRA ELECTRONICS CORPORATION**
Address	**6500 WEST CORTLAND STREET CHICAGO IL 60707 USA**
Product Model Number	ESR 755
Product Description	RADAR DETECTOR
FCC ID:	BBOESR855
Date Sample Received	05/19/2015
Date Tested	06/05/2015
Tested By	Christian Pawlak
Approved By	Sid Sanders
Test Results	☒ PASS ☐ FAIL

Report Number	Version Number	Description	Issue Date
965UT15TestReport.docx	Rev.1	Initial Issue	06/05/2015

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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:

Christian Pawlak
Engineering Project Manager

Date:
06/05/2015

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GENERAL INFORMATION

EUT Specification

EUT Description	RADAR DETECTOR
FCC ID	BBOESR855
Model Number	ESR 755
Operating Frequency	10.525GHz(X-Band), 24.150 GHz (K-Band), 33.4-36.0G Hz (Ka Band)
EUT Power Source	☐ 110–120Vac/50– 60Hz
	☒ DC Power 12V
	☐ Battery Operated Exclusively
Test Item	☐ Prototype
	☐ Pre-Production
	☒ Production
Type of Equipment	☐ Fixed
	☒ Mobile
	☐ Portable
Test Conditions	Temperature: 24-26ºC Relative humidity: 50-65% Barometric Pressure: 1014 mb
Modifications to the EUT	None
Test Exercise	The EUT was operated in a normal mode.
Applicable Standards	FCC Pt 15.109, Pt 15.107,
Test Procedure	ANSI C63.4: 2009
Test Facility	Timco Engineering Inc. at 849 NW State Road 45 Newberry, FL 32669 USA.

TEST RESULTS SUMMARY

FCC Rules Part No.	RESULTS Pass / Fail / NA
15.109 Radiated Spurious Emissions	Pass

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RADIATED SPURIOUS EMISSIONS

Rules Part: 47 CFR §15.109

Requirements:

Frequency	Limits
30 MHz – 88 MHz	40.0 dBµV/m measured @ 3 meters
80 MHz – 216 MHz	43.5 dBµV/m measured @ 3 meters
216 MHz – 960 MHz	46.0 dBµV/m measured @ 3 meters
960 MHz – 1 GHz	54.0 dBµV/m measured @ 3 meters
11.7 GHz - 12.2GHz	54.0 dBµV/m measured @ 3 meters

Test Procedure:

A semi-anechoic chamber and metering devices were configured as per ANSI C63.4-2009. The Equipment Under Test (EUT) was placed on a table 80 cm high and with dimensions of 1m by 1.5m. A search was made of the spectrum from 30 to 1000MHz and from 11.7 to 12.2GHz. When an emission was found, the table was rotated and the antenna height was varied from 1m to 4m to maximize emission strength. Emissions were recorded in both the horizontal and vertical planes. Emissions more than 20dB from the limit were not recorded.

Test Data:

Emission Frequency MHz	Meter Reading dBuV	Detector	Antenna Polarity	Coax Loss dB	Correction Factor dB/m	Field Strength dBuV/m	Margin dB
65.69	6.3	Peak	V	0.41	6.07	12.82	27.18
95.66	8.3	Peak	V	0.56	10.71	19.56	23.94
127.53	8.7	Peak	H	0.66	12.26	21.64	21.86
167.04	10.5	Peak	H	0.77	15.82	27.12	16.38
242.31	6.6	Peak	V	0.91	11.06	18.58	27.42
546.15	23.0	Peak	V	1.53	18.14	42.71	3.29
12,195.19	0.2	Average	H	7.94	38.93	47.08	6.92

* The EUT is operating in the following bands:
  10.425 – 10.575 GHz (X-Band)
  24.000 – 24.250 GHz (K-Band)
  33.400 – 36.000 GHz (Ka-Band)

Results Meet Requirements

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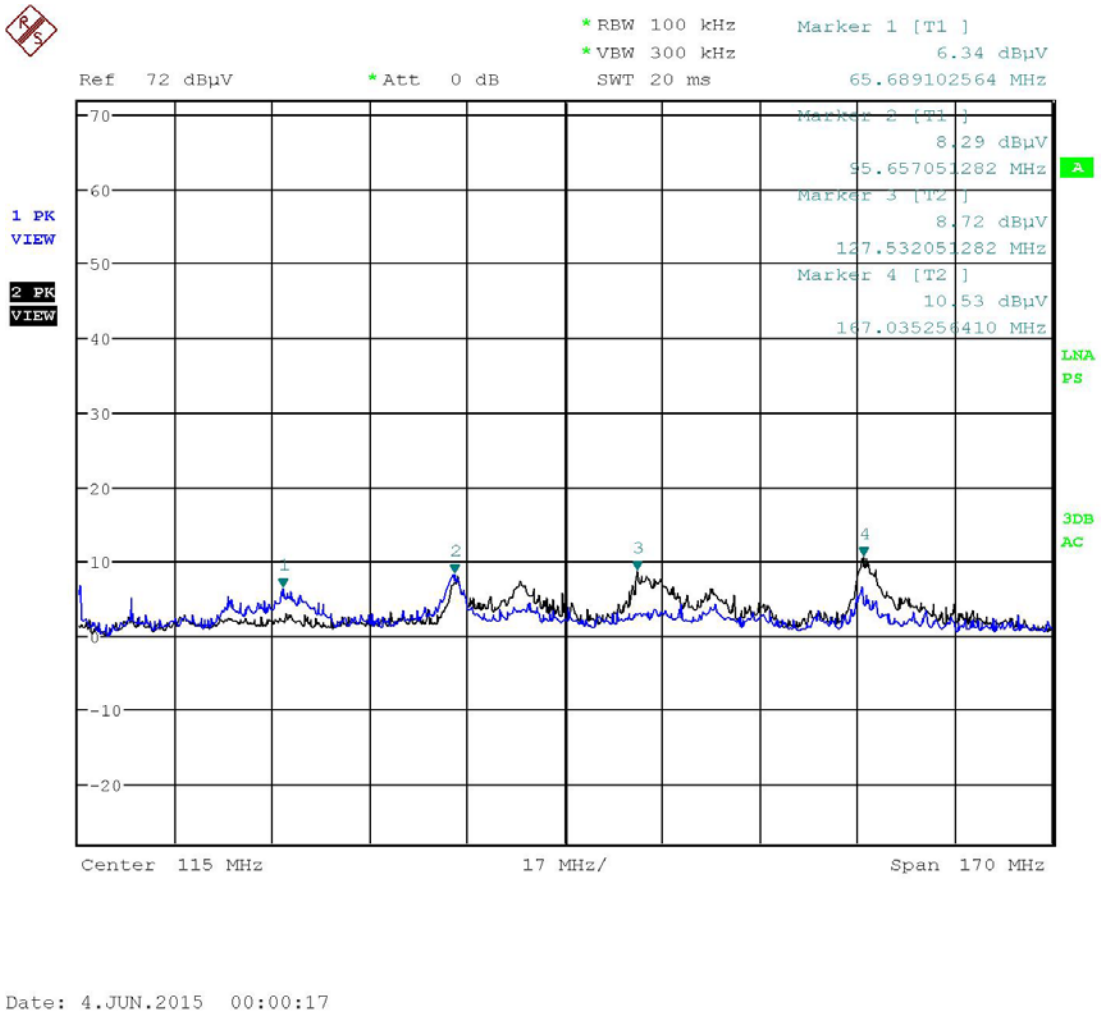
30 MHz – 200 MHz PLOT



Results Meet Requirements

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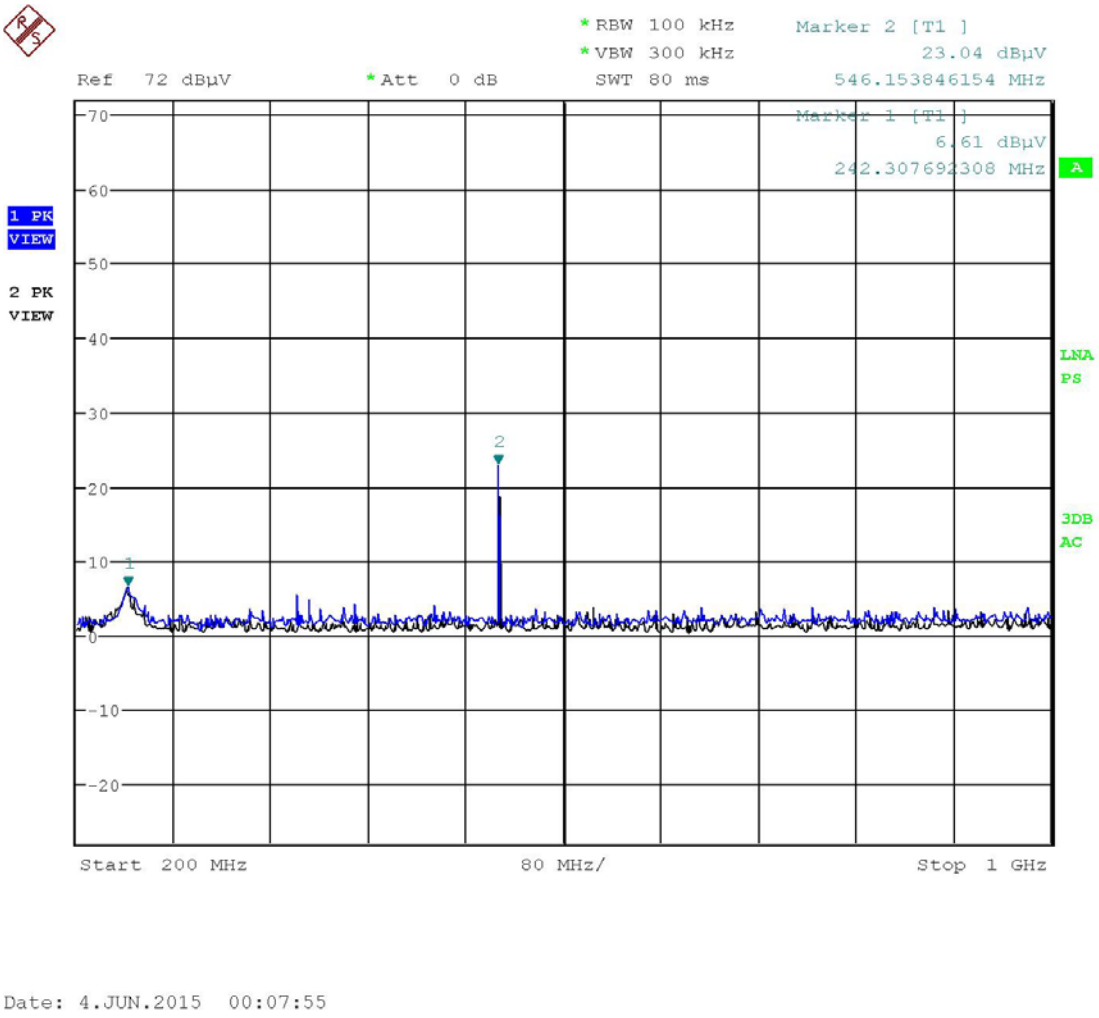
200 MHz – 1 GHz PLOT



Results Meet Requirements

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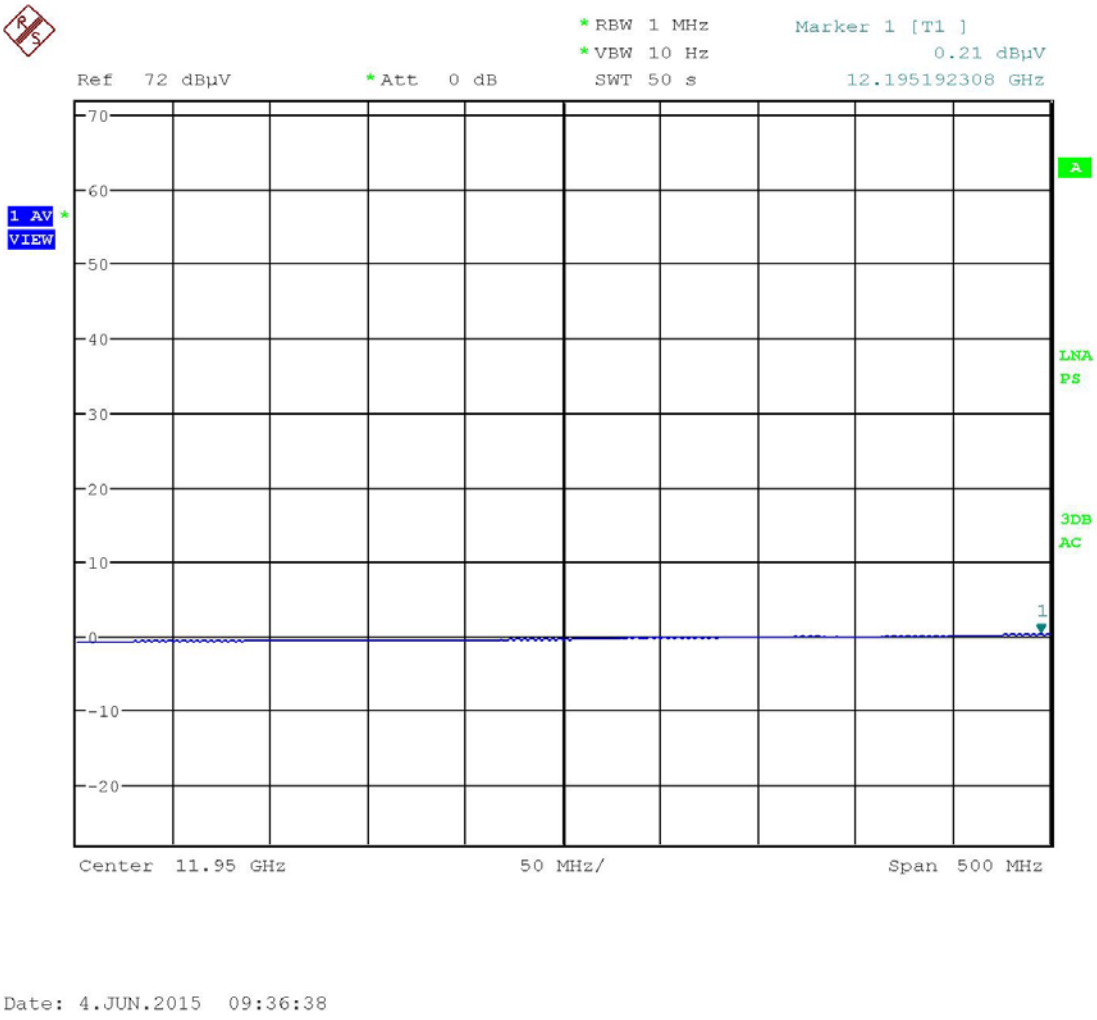
11.7 GHz – 12.2 GHz PLOT



Results Meet Requirements

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TEST EQUIPMENT LIST

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

***EMI RECEIVER SOFTWARE VERSION**

The receiver firmware used was version 4.43 Service Pack 3

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