



Report No.: 1910-071EA-181

Revision: N/C

Radar Sensor Calibration Verification Certificate of Calibration

Model: RRS24F-ST3

Part Number / Serial Number:

590-113/65965

Ex. 590-XXX / 6XXXX

Description:

Radar Characteristics Validation

In compliance with:

RRS24F-ST3 Radar Sensor Calibration Verification Procedure Documentation (5030-0150)

Date of Issue: February 1, 2023

Owner of EUT:

**Verra Mobility
1150 N. Alma School Rd
Mesa, AZ 85201**

Attention of:

**Engineering Department
Phone: (480) 443-7000**

Test Facility	
Test Laboratory	Keystone Compliance, LLC
Address	131 North Columbus Innerbelt
City, State, Zip Code	New Castle, PA 16101
Phone	(724) 657-9940
Email	emcteam@keystonecompliance.com
Web Site	www.keystonecompliance.com

Test Personnel	
Name	Camren Morgan
Title	EMC Test Engineer
Signature	

Radar Sensor Calibration Verification
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The frequency measurements performed and recorded within this report demonstrate that the JENOPTIK RR24F-ST3 radar has an accuracy of less than or equal to 0.62 mph in the range of 6.21 mph to 62.14 mph and an accuracy of 0.62 mph to 1.86 mph in the range of 62.14 mph to 186.41 mph. This is equal to or better than +/- 1 mph accuracy up to 100 mph, as specified by the manufacturer.

FSK Frequency Set 1					
Nominal Frequency (GHz)	Measured Frequency (GHz)	Amplitude (dBm)	Frequency Deviation (MHz)	Limit (MHz)	Results
$f_0 = 24.08$	24.078275	15.6748297	-1.72	+/- 48.2	PASS
$f_1 = 24.08725$	24.085424	15.9284434	-1.83	+/- 48.2	PASS
$f_2 = 24.089$	24.08705	17.1960724	-1.95	+/- 48.2	PASS
$f_3 = 24.09$	24.088351	17.363433	-1.65	+/- 48.2	PASS

FSK Frequency Set 2					
Nominal Frequency (GHz)	Measured Frequency (GHz)	Amplitude (dBm)	Frequency Deviation (MHz)	Limit (MHz)	Results
$f_0 = 24.12$	24.117926	17.2302461	-2.07	+/- 48.2	PASS
$f_1 = 24.12725$	24.125401	17.5718535	-1.85	+/- 48.2	PASS
$f_2 = 24.129$	24.127025	18.8614845	-1.98	+/- 48.2	PASS
$f_3 = 24.13$	24.128	18.7908454	-2.00	+/- 48.2	PASS

FSK Frequency Set 3					
Nominal Frequency (GHz)	Measured Frequency (GHz)	Amplitude (dBm)	Frequency Deviation (MHz)	Limit (MHz)	Results
$f_0 = 24.16$	24.15855	14.9336416	-1.45	+/- 48.2	PASS
$f_1 = 24.16725$	24.166351	15.3662477	-0.90	+/- 48.2	PASS
$f_2 = 24.169$	24.167975	16.6328756	-1.03	+/- 48.2	PASS
$f_3 = 24.17$	24.16895	17.112231	-1.05	+/- 48.2	PASS