



Report No.: 1910-071EA

Revision: N/C

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## Radar Sensor Calibration Verification Certificate of Calibration

**Model: RRS24F-ST3**

**Part Number / Serial Number:**

**590-113 / 61776**

**Ex. 590-XXX / 6XXXX**

**Description:**

**Radar Characteristics Validation**

**In compliance with:**

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

**Date of Issue: August 15, 2024**

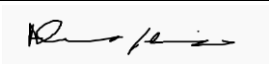
**Owner of EUT:**

**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
Email	questions@keystonecompliance.com
Web Site	www.keystonecompliance.com

Test Personnel	
Name	Alex Herrin
Title	EMC Test Engineer
Signature	

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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
$f_0 = 24.08$	24.078925	11.8928297	-1.07	+/- 48.2	PASS
$f_1 = 24.08725$	24.086075	12.2524444	-1.17	+/- 48.2	PASS
$f_2 = 24.089$	24.0877	13.4630754	-1.30	+/- 48.2	PASS
$f_3 = 24.09$	24.089	13.627436	-1.00	+/- 48.2	PASS

**FSK Frequency Set 2**

Nominal Frequency (GHz)	Measured Frequency (GHz)	Amplitude (dBm)	Frequency Deviation (MHz)	Limit (MHz)	Results
$f_0 = 24.12$	24.1189	11.3832461	-1.10	+/- 48.2	PASS
$f_1 = 24.12725$	24.12605	11.5958565	-1.20	+/- 48.2	PASS
$f_2 = 24.129$	24.128	12.8074865	-1.00	+/- 48.2	PASS
$f_3 = 24.13$	24.128975	13.0448464	-1.02	+/- 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	12.5496386	-1.45	+/- 48.2	PASS
$f_1 = 24.16725$	24.1657	12.5522447	-1.55	+/- 48.2	PASS
$f_2 = 24.169$	24.16765	13.6958736	-1.35	+/- 48.2	PASS
$f_3 = 24.17$	24.168625	14.010233	-1.38	+/- 48.2	PASS