OakDOT Speed Safety Program
Camera Calibration Records
11/12/2025

According to California's AB645 legislation, camera calibration must be verified at least once per year by an indepedent calibration laboratory. The next camera calibration will be performed on or before 11/11/2026.

Camera systems and required signage approaches are inspected once every 30 days.

Camera	Page in Calibration Document
OAKF001 NB 4211 MLK Jr Way	2
OAKF002 SB 4211 MLK Jr Way	9
OAKF003 NB 5995 Claremont Ave	16
OAKF004 SB 5995 Claremont Ave	23
OAKF005 EB 2424 Foothill Blvd	30
OAKF006 WB 2424 Foothill Blvd	37
OAKF007 EB 2005 Foothill Blvd	44
OAKF008 WB 2005 Foothill Blvd	51
OAKF009 EB 1035 7th St	58
OAKF010 WB 1014 7th St	65
OAKF011 EB 1055 W Grand Ave	72
OAKF012 WB 1050 W Grand Ave	79
OAKF013 NB 2710 Broadway	86
OAKF014 SB 2735 Broadway	93
OAKF015 NB 2564 San Pablo Ave	100
OAKF016 SB 2551 San Pablo Ave	107
OAKF017 EB 452 7th St	114
OAKF018 EB 4635 Macarthur Blvd	121
OAKF019 WB 4635 Macarthur Blvd	128
OAKF020 NB 2374 Fruitvale Ave	135
OAKF021 SB 2500 Fruitvale Ave	142
OAKF022 EB 4001 International Blvd	149
OAKF023 WB 4000 International Blvd	156
OAKF024 NB Hegenberger Rd @ Spenc	163
OAKF025 SB Hegenberger Rd @ Spenc	170
OAKF026 NB 2206 73rd Ave	177
OAKF027 SB 2345 73rd Ave	184
OAKF028 NB 8648 Bancroft Ave	191
OAKF029 SB 8605 Bancroft Ave	198
OAKF030 NB 998 98th Ave	205
OAKF031 SB 998 98th Ave	212
OAKF032 NB 1928 98th Ave	219
OAKF033 SB 1928 98th Ave	226
OAKF034 EB 6161 Bancroft Ave	233
OAKF035 WB 6130 Bancroft Ave	240

Radar Sensor Calibration Verification
Test Report

Model: UMRR-11 T44

Part Number / Serial Number:
0x000461A6

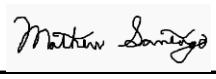
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

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	Applus + Keystone
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	Mathew Santiago
Title	EMC Test Engineer
Signature	

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Revision	Date	Description	Revised By
N/C	##############	Initial Release	Mathew Santiago

Contents

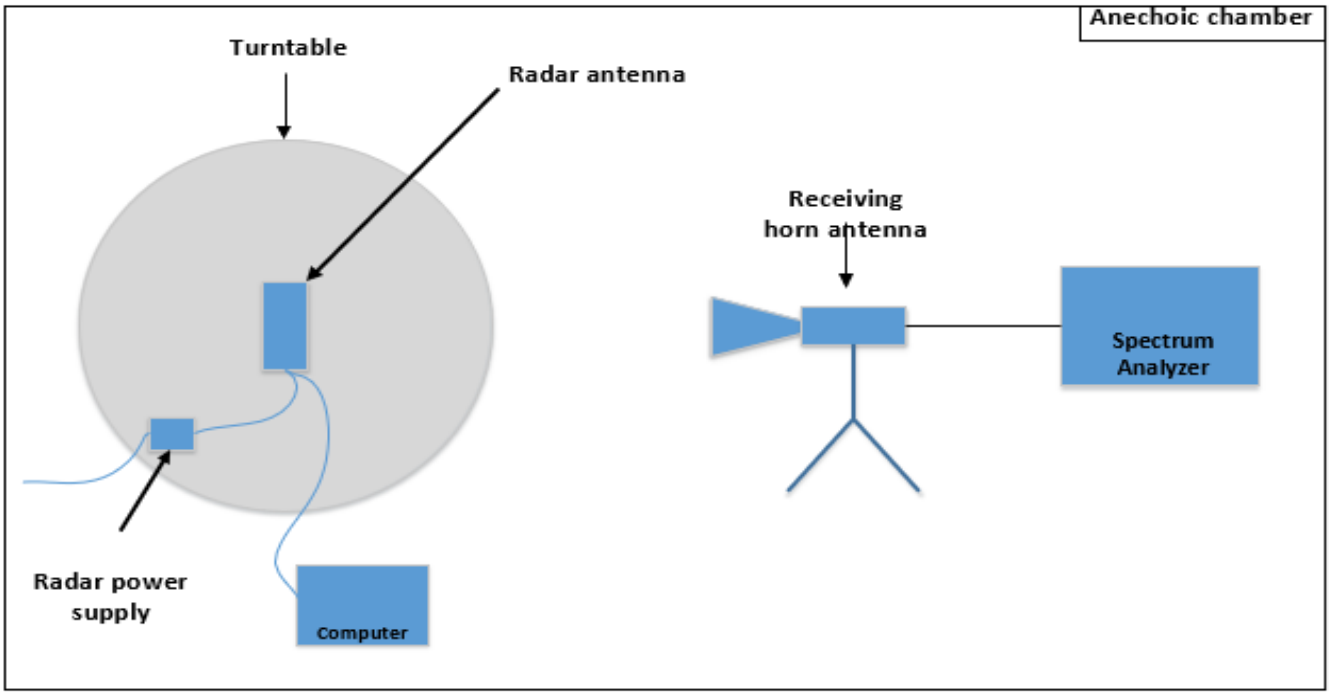
Test Setup Diagram..... 4

Test Equipment Utilized..... 4

Frequency Characteristics Test Results..... 5

Test Setup Diagram

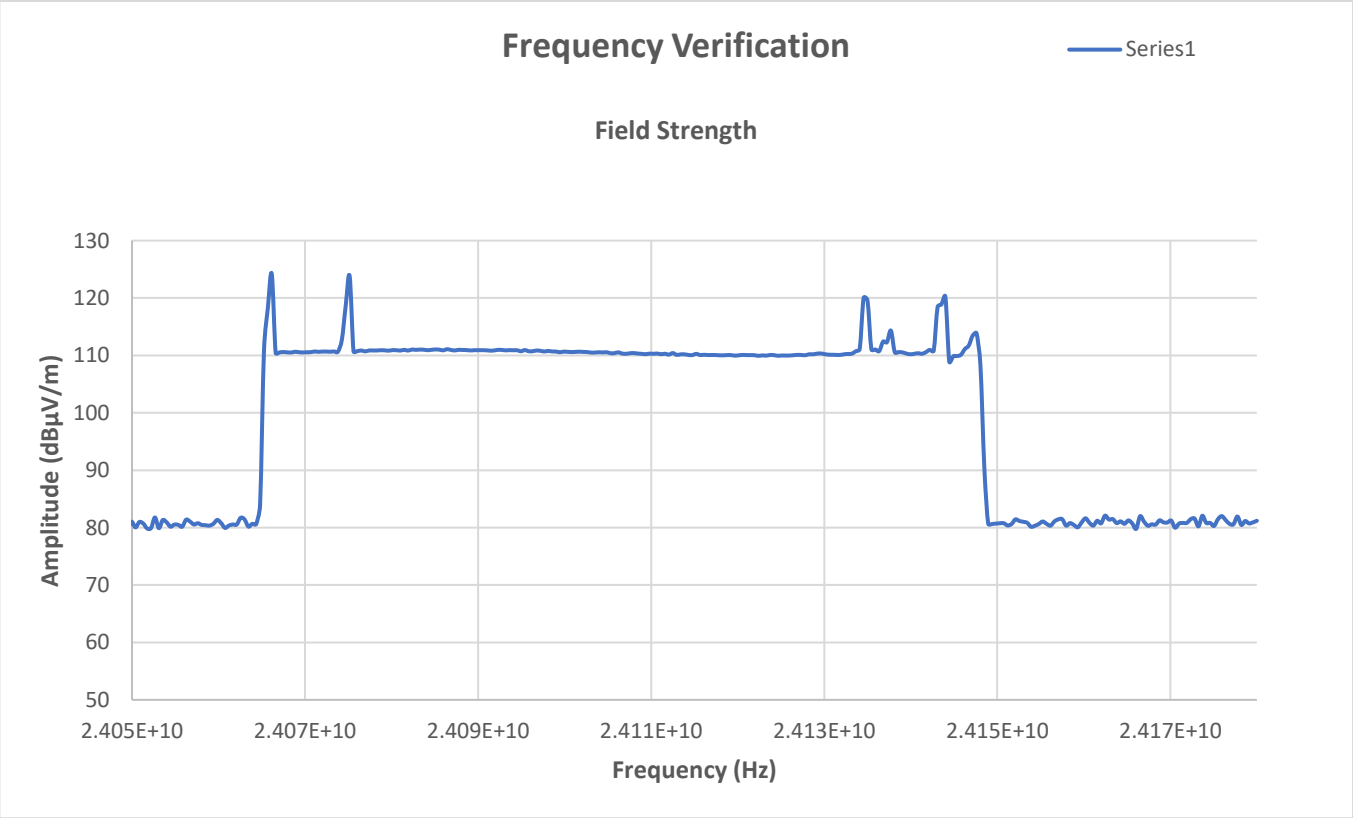




Test Equipment Utilized

Description	Manufacturer	Model #	Serial #	Asset #	Cal. Due Date
EMC Analyzer	Agilent	E7405	US40240238	EB046	1/29/2026
DRG Horn Antenna	ETS Lindgren	3116	00026390	EE017	5/21/2026
Pre-Amplifier	Keystone Compliance	PA-1	0002	EG003	6/30/2026
Turntable Controller	EMCO	1061.2.013	9401-1717	EI009	UWCE

Frequency Measurements:



Frequency Verification					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	124.19	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x000461A6

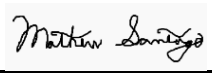
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

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	Applus+ Keystone
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	Mathew Santiago
Title	EMC Test Engineer
Signature	

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x000461A6

Date of Issue: November 11, 2025

This speed measuring device has been tested and verified to be functioning in accordance with the manufacture's specifications.

The frequency measurements performed and reported within this report demonstrate that the SmartMicro UMRR-11 T44 radar system has an accuracy of less than or equal to 1 mph up to 100 mph and 1% accuracy thereafter up to 199 mph maximum.

FSK Frequency Set 1					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	124.19	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Test Report

Model: UMRR-11 T44

Part Number / Serial Number:
0x000461AB

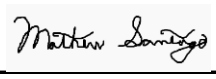
Description:
Radar Characteristics Validation
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Date of Issue: November 11, 2025

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Title	EMC Test Engineer
Signature	

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N/C	##############	Initial Release	Mathew Santiago

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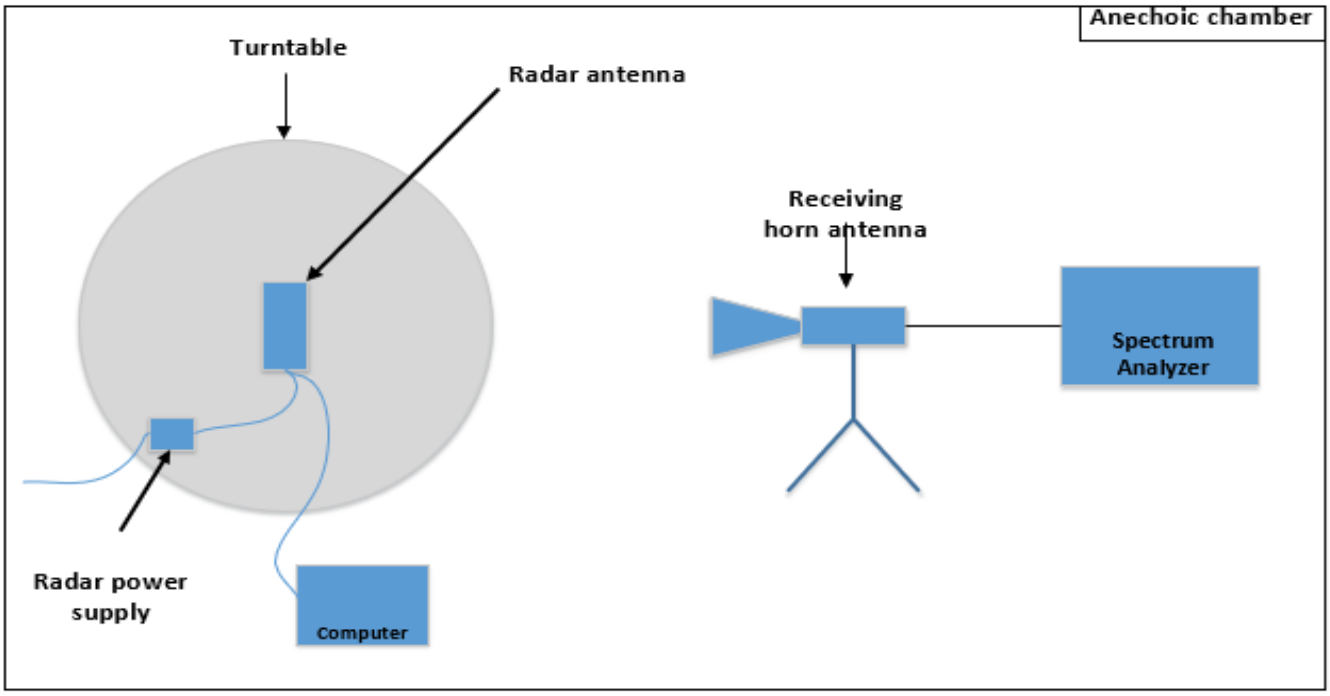
Test Setup Diagram..... 4

Test Equipment Utilized..... 4

Frequency Characteristics Test Results..... 5

Test Setup Diagram

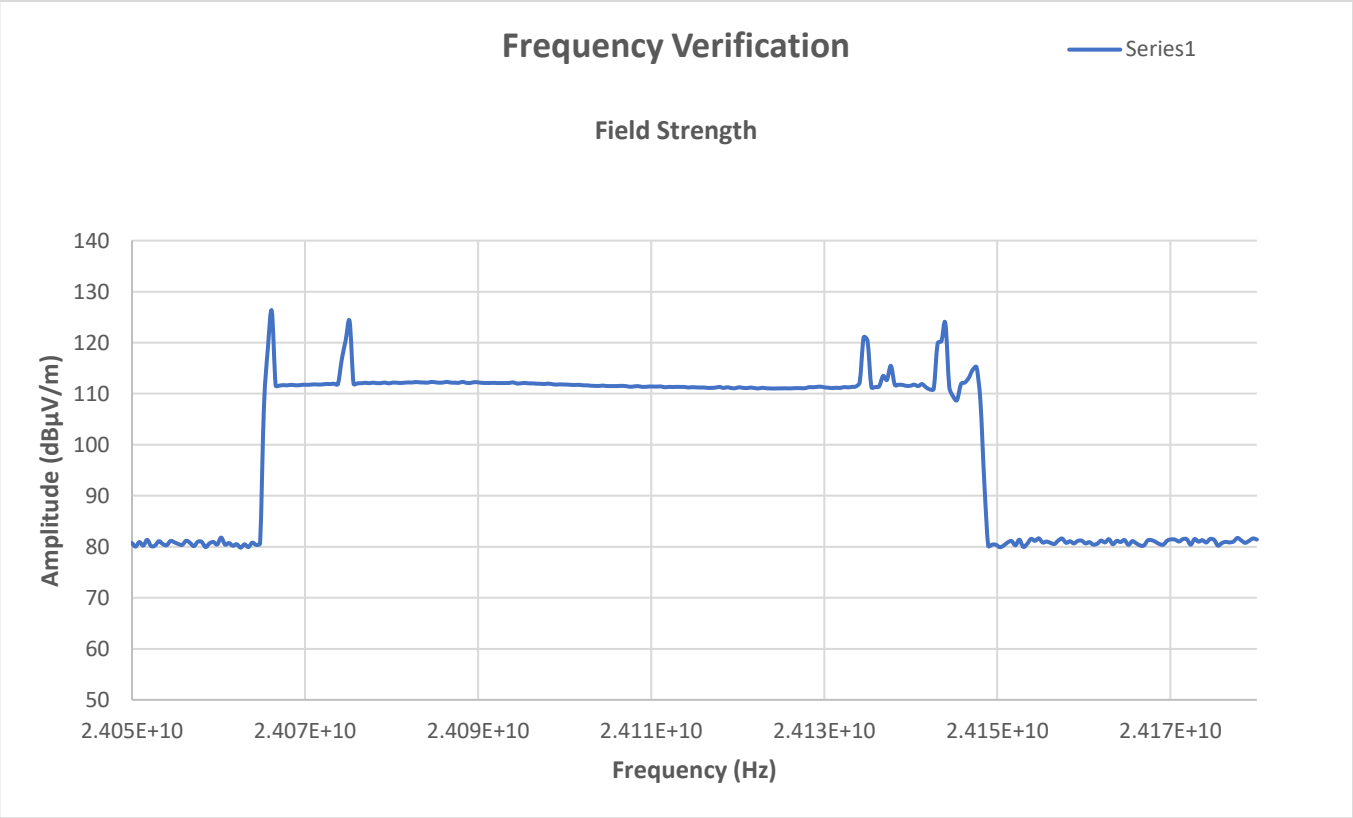




Test Equipment Utilized

Description	Manufacturer	Model #	Serial #	Asset #	Cal. Due Date
EMC Analyzer	Agilent	E7405	US40240238	EB046	1/29/2026
DRG Horn Antenna	ETS Lindgren	3116	00026390	EE017	5/21/2026
Pre-Amplifier	Keystone Compliance	PA-1	0002	EG003	6/30/2026
Turntable Controller	EMCO	1061.2.013	9401-1717	EI009	UWCE

Frequency Measurements:



Frequency Verification					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	126.22	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x000461AB

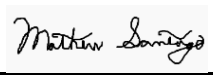
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
1150 N. Alma School Rd
Mesa, AZ 85201

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

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Address	131 North Columbus Innerbelt
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Email	questions@keystonecompliance.com
Web Site	www.keystonecompliance.com

Test Personnel	
Name	Mathew Santiago
Title	EMC Test Engineer
Signature	

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x000461AB

Date of Issue: November 11, 2025

This speed measuring device has been tested and verified to be functioning in accordance with the manufacture's specifications.

The frequency measurements performed and reported within this report demonstrate that the SmartMicro UMRR-11 T44 radar system has an accuracy of less than or equal to 1 mph up to 100 mph and 1% accuracy thereafter up to 199 mph maximum.

FSK Frequency Set 1					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	126.22	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Test Report

Model: UMRR-11 T44

Part Number / Serial Number:
0x00046320

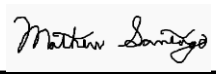
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

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	Applus + Keystone
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	Mathew Santiago
Title	EMC Test Engineer
Signature	

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Revision	Date	Description	Revised By
N/C	##############	Initial Release	Mathew Santiago

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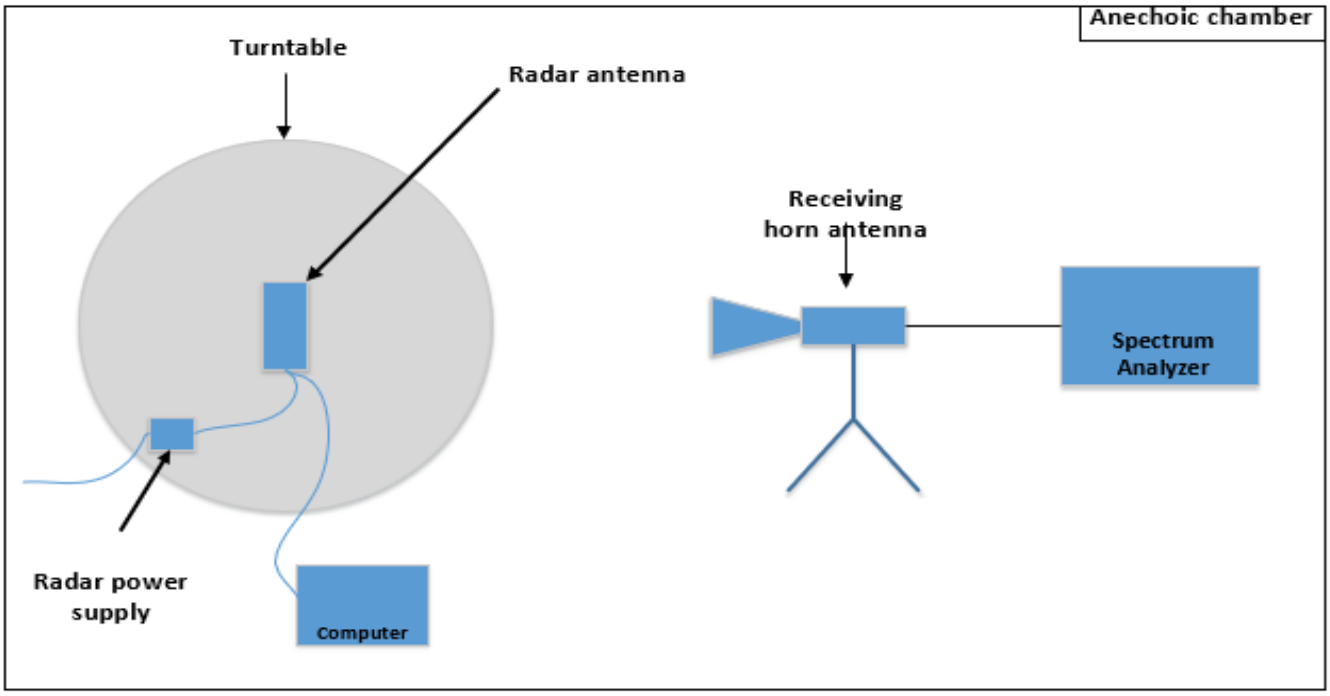
Test Setup Diagram..... 4

Test Equipment Utilized..... 4

Frequency Characteristics Test Results..... 5

Test Setup Diagram

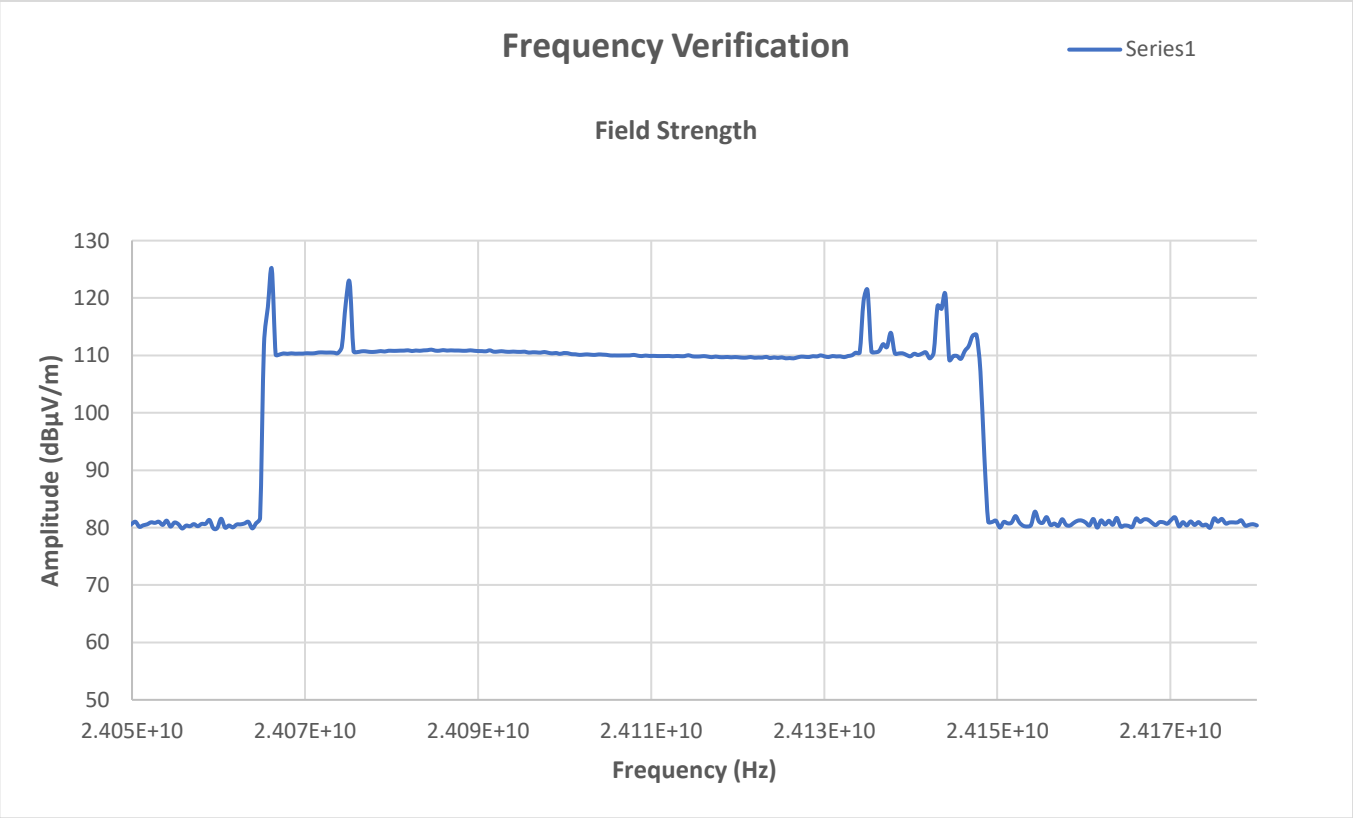




Test Equipment Utilized

Description	Manufacturer	Model #	Serial #	Asset #	Cal. Due Date
EMC Analyzer	Agilent	E7405	US40240238	EB046	1/29/2026
DRG Horn Antenna	ETS Lindgren	3116	00026390	EE017	5/21/2026
Pre-Amplifier	Keystone Compliance	PA-1	0002	EG003	6/30/2026
Turntable Controller	EMCO	1061.2.013	9401-1717	EI009	UWCE

Frequency Measurements:



Frequency Verification					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	125.05	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x00046320

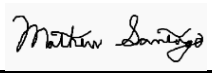
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

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	Applus+ Keystone
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	Mathew Santiago
Title	EMC Test Engineer
Signature	

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x00046320

Date of Issue: November 11, 2025

This speed measuring device has been tested and verified to be functioning in accordance with the manufacture's specifications.

The frequency measurements performed and reported within this report demonstrate that the SmartMicro UMRR-11 T44 radar system has an accuracy of less than or equal to 1 mph up to 100 mph and 1% accuracy thereafter up to 199 mph maximum.

FSK Frequency Set 1					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	125.05	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Test Report

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004896E

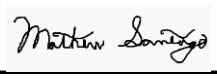
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
1150 N. Alma School Rd
Mesa, AZ 85201

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

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City, State, Zip Code	New Castle, PA 16101
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Test Personnel	
Name	Mathew Santiago
Title	EMC Test Engineer
Signature	

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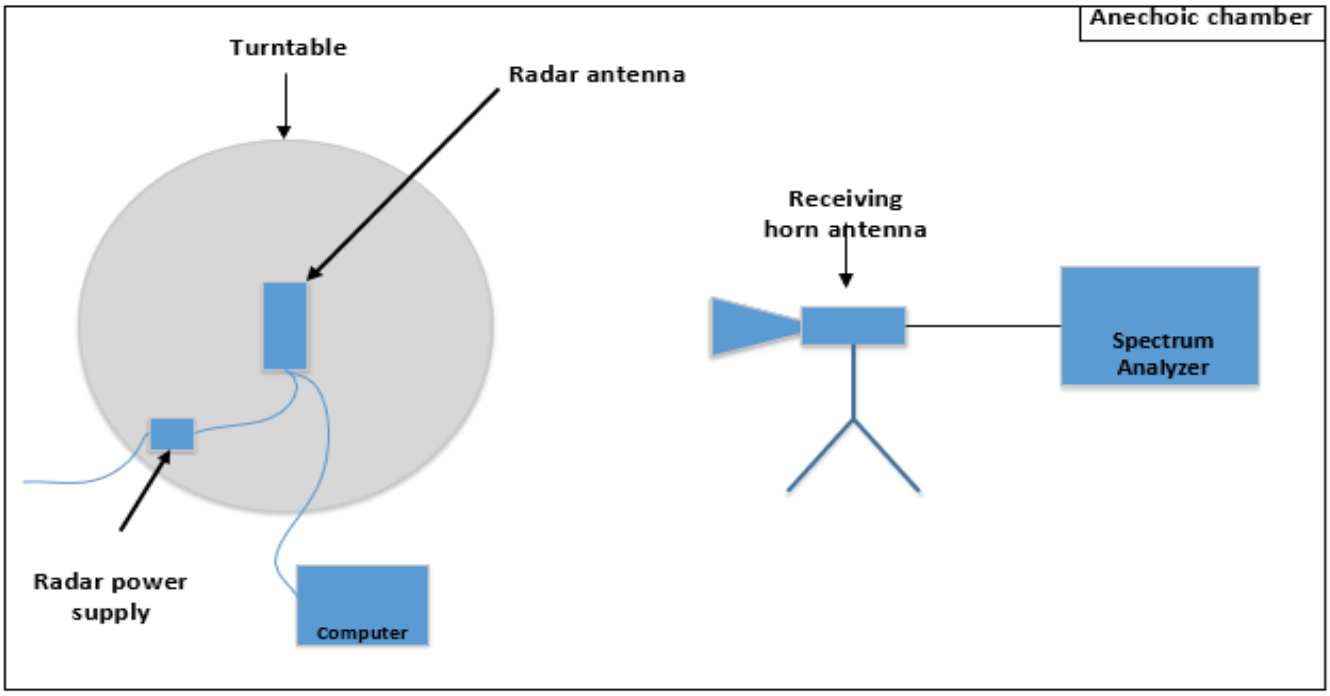
Test Setup Diagram..... 4

Test Equipment Utilized..... 4

Frequency Characteristics Test Results..... 5

Test Setup Diagram

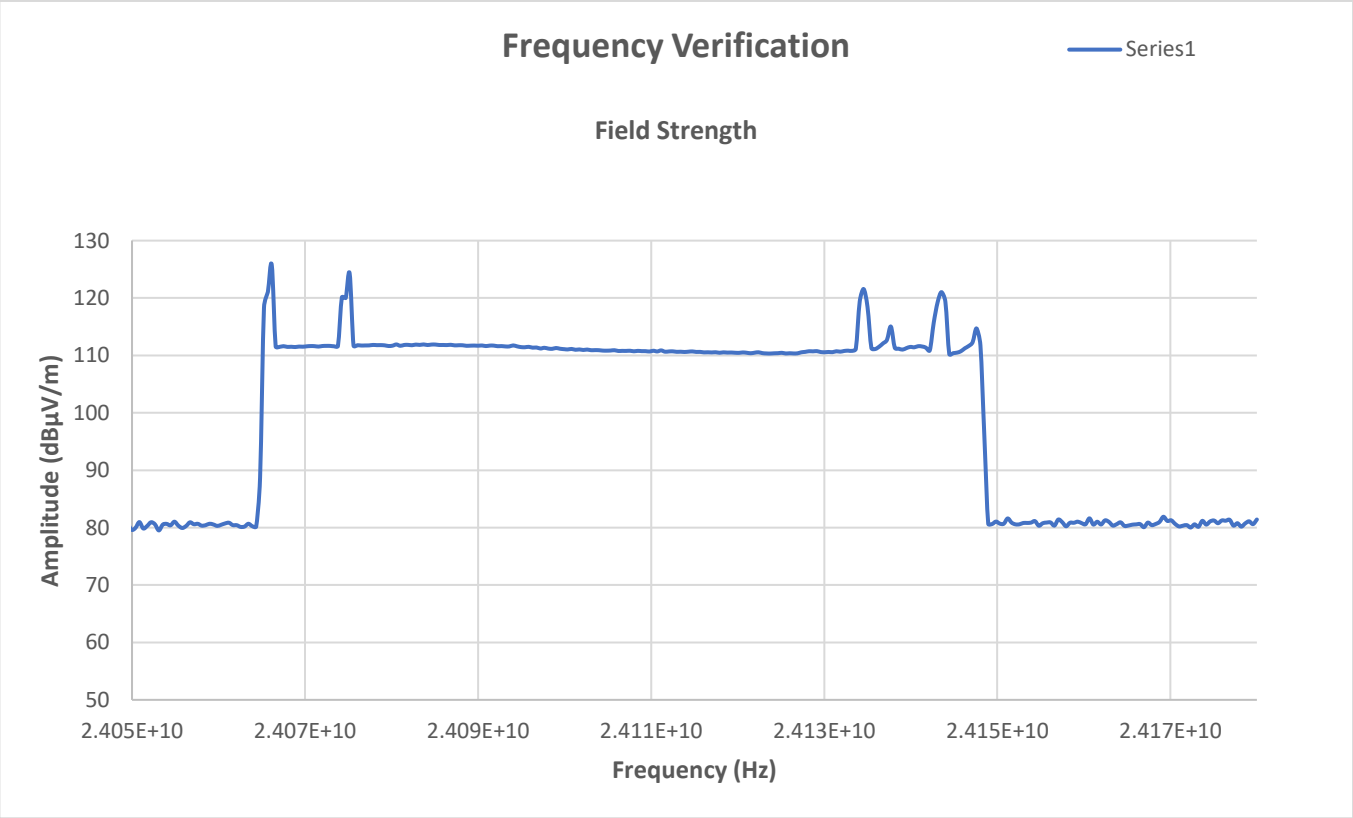




Test Equipment Utilized

Description	Manufacturer	Model #	Serial #	Asset #	Cal. Due Date
EMC Analyzer	Agilent	E7405	US40240238	EB046	1/29/2026
DRG Horn Antenna	ETS Lindgren	3116	00026390	EE017	5/21/2026
Pre-Amplifier	Keystone Compliance	PA-1	0002	EG003	6/30/2026
Turntable Controller	EMCO	1061.2.013	9401-1717	EI009	UWCE

Frequency Measurements:



Frequency Verification					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	125.75	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004896E

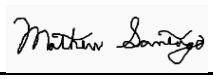
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
1150 N. Alma School Rd
Mesa, AZ 85201

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

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

Test Personnel	
Name	Mathew Santiago
Title	EMC Test Engineer
Signature	

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004896E

Date of Issue: November 11, 2025

This speed measuring device has been tested and verified to be functioning in accordance with the manufacture's specifications.

The frequency measurements performed and reported within this report demonstrate that the SmartMicro UMRR-11 T44 radar system has an accuracy of less than or equal to 1 mph up to 100 mph and 1% accuracy thereafter up to 199 mph maximum.

FSK Frequency Set 1					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	125.75	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Test Report

Model: UMRR-11 T44

Part Number / Serial Number:
0x000461AC

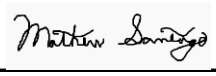
Description:
Radar Characteristics Validation
In compliance with:
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Date of Issue: November 11, 2025

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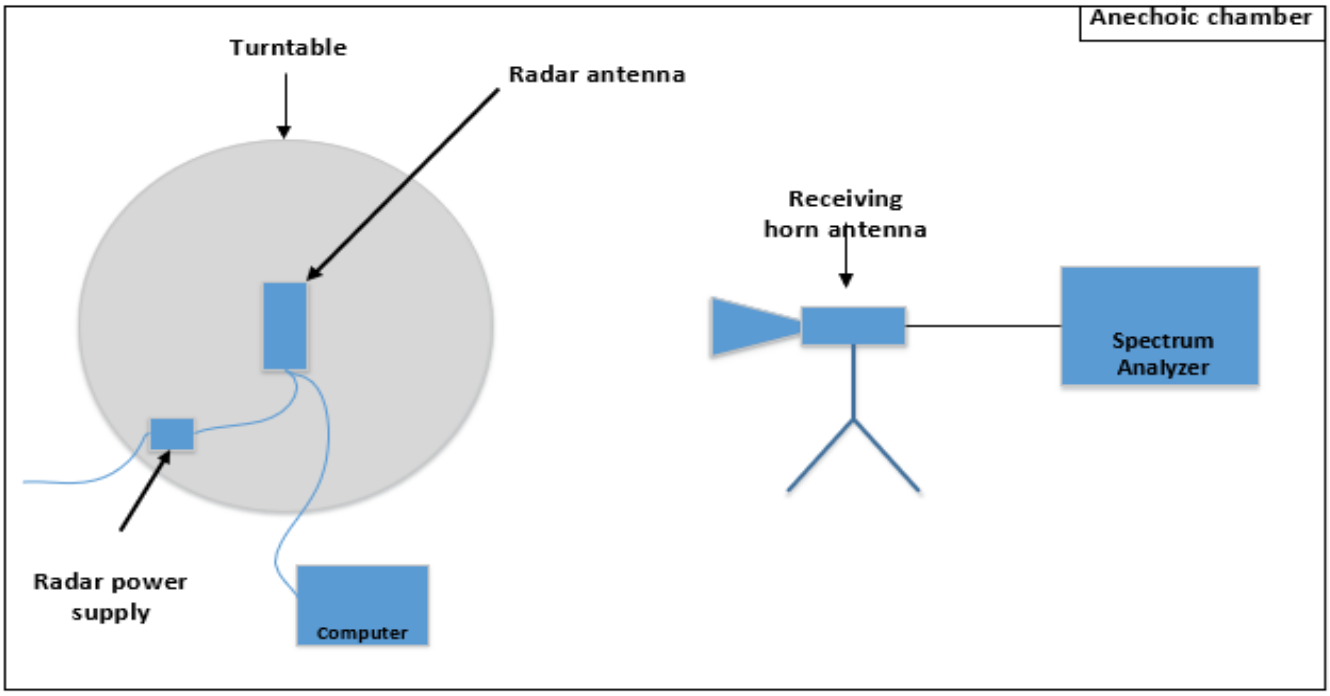
Test Setup Diagram..... 4

Test Equipment Utilized..... 4

Frequency Characteristics Test Results..... 5

Test Setup Diagram

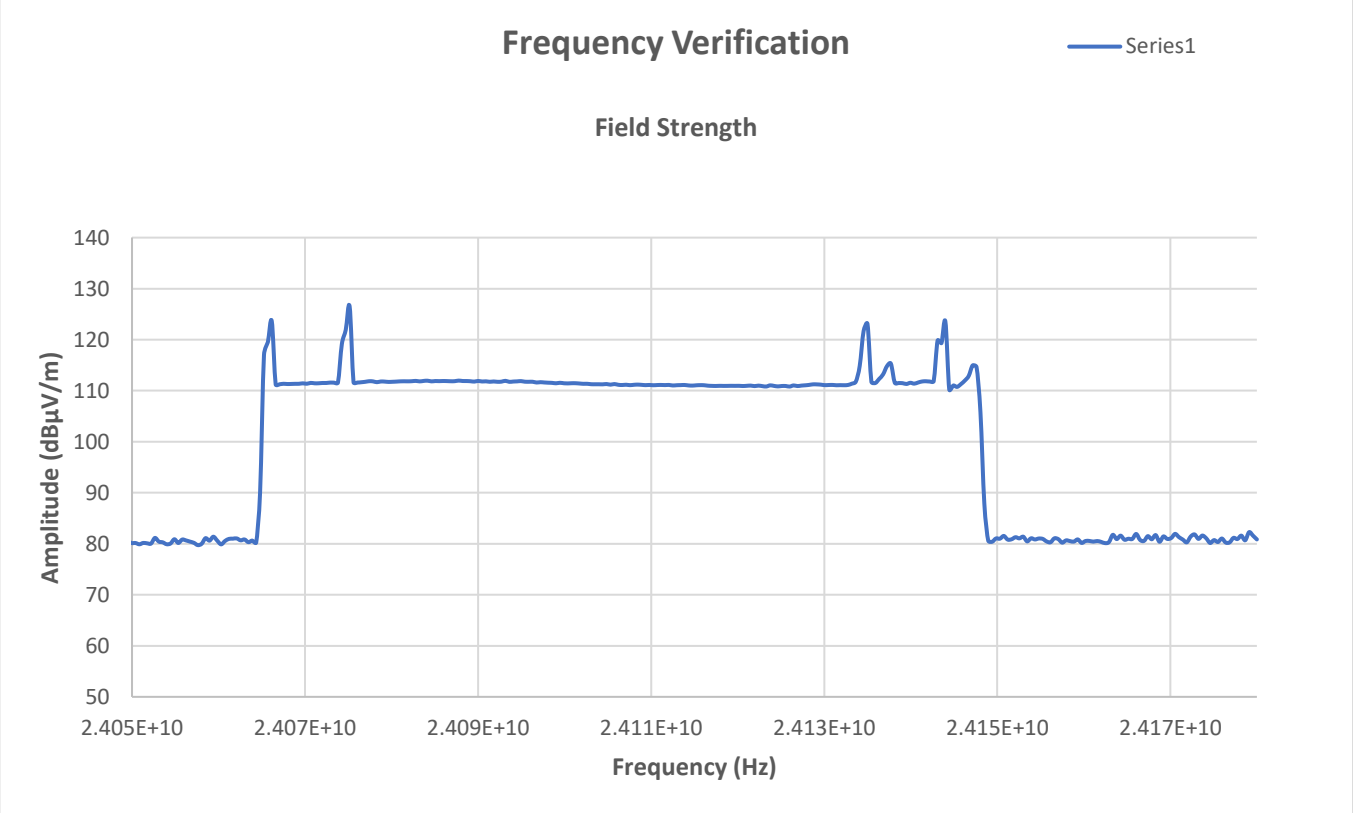




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Description	Manufacturer	Model #	Serial #	Asset #	Cal. Due Date
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Turntable Controller	EMCO	1061.2.013	9401-1717	EI009	UWCE

Frequency Measurements:



Frequency Verification					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	126.50	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x000461AC

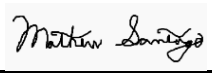
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

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Test Personnel	
Name	Mathew Santiago
Title	EMC Test Engineer
Signature	

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x000461AC

Date of Issue: November 11, 2025

This speed measuring device has been tested and verified to be functioning in accordance with the manufacture's specifications.

The frequency measurements performed and reported within this report demonstrate that the SmartMicro UMRR-11 T44 radar system has an accuracy of less than or equal to 1 mph up to 100 mph and 1% accuracy thereafter up to 199 mph maximum.

FSK Frequency Set 1					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	126.50	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Test Report

Model: UMRR-11 T44

Part Number / Serial Number:
0x000488A2

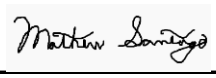
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

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	Applus + Keystone
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	Mathew Santiago
Title	EMC Test Engineer
Signature	

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Revision	Date	Description	Revised By
N/C	##############	Initial Release	Mathew Santiago

Contents

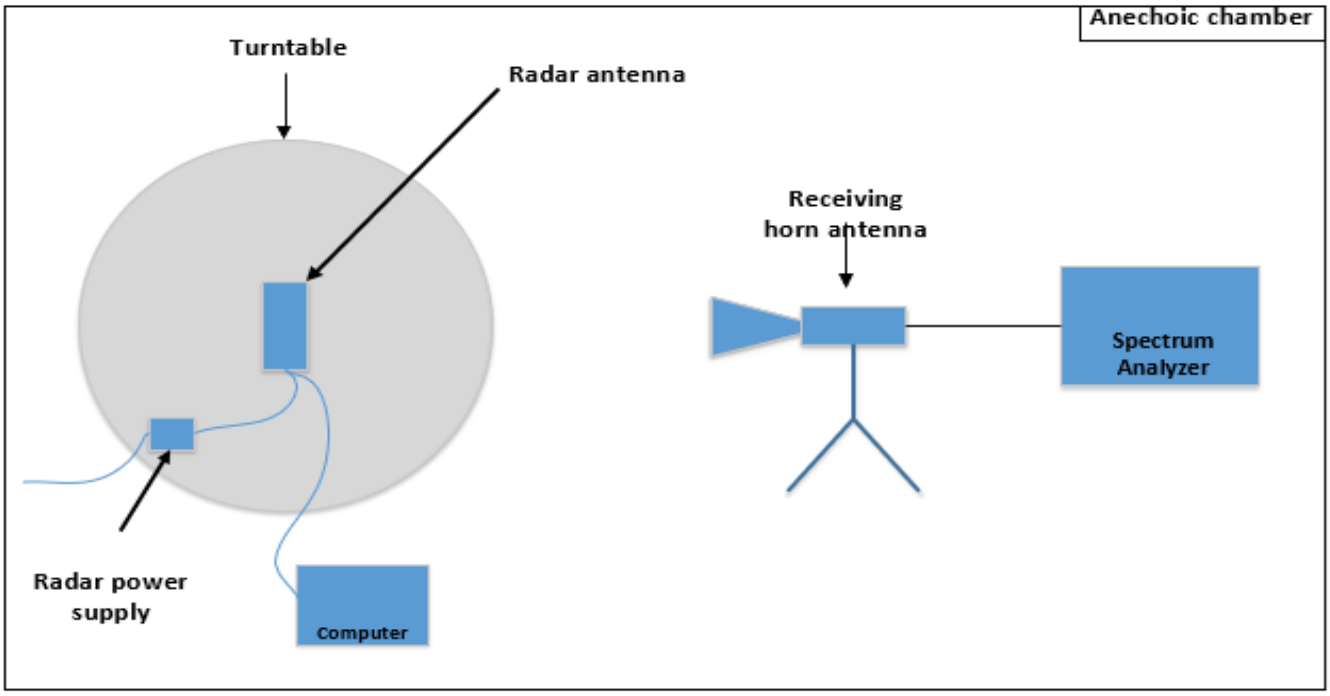
Test Setup Diagram..... 4

Test Equipment Utilized..... 4

Frequency Characteristics Test Results..... 5

Test Setup Diagram

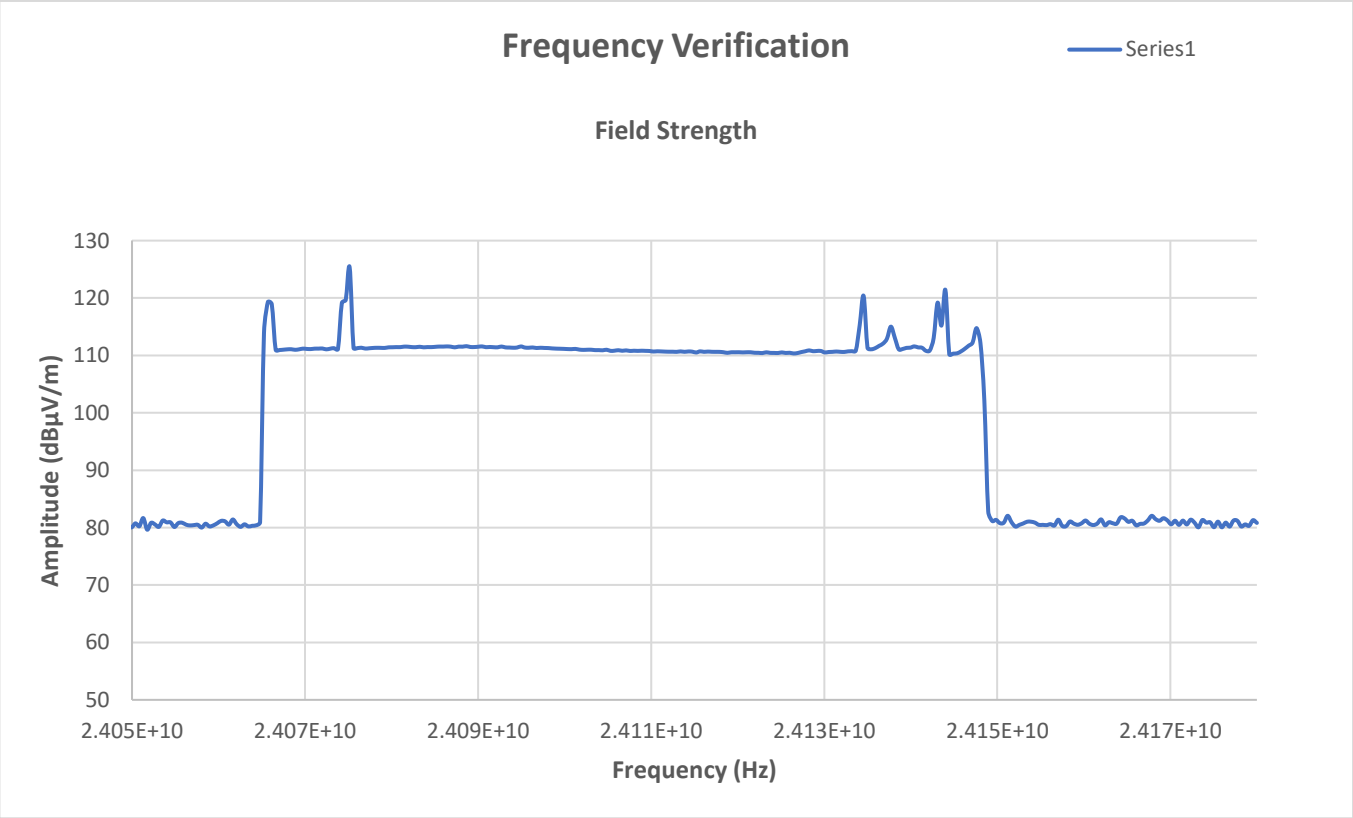




Test Equipment Utilized

Description	Manufacturer	Model #	Serial #	Asset #	Cal. Due Date
EMC Analyzer	Agilent	E7405	US40240238	EB046	1/29/2026
DRG Horn Antenna	ETS Lindgren	3116	00026390	EE017	5/21/2026
Pre-Amplifier	Keystone Compliance	PA-1	0002	EG003	6/30/2026
Turntable Controller	EMCO	1061.2.013	9401-1717	EI009	UWCE

Frequency Measurements:



Frequency Verification					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	83.3	125.35	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x000488A2

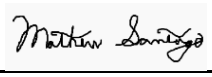
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
1150 N. Alma School Rd
Mesa, AZ 85201

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

Test Facility	
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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	Mathew Santiago
Title	EMC Test Engineer
Signature	

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x000488A2

Date of Issue: November 11, 2025

This speed measuring device has been tested and verified to be functioning in accordance with the manufacture's specifications.

The frequency measurements performed and reported within this report demonstrate that the SmartMicro UMRR-11 T44 radar system has an accuracy of less than or equal to 1 mph up to 100 mph and 1% accuracy thereafter up to 199 mph maximum.

FSK Frequency Set 1					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	83.3	125.35	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Test Report

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004889C

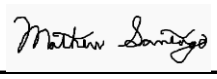
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
1150 N. Alma School Rd
Mesa, AZ 85201

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

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Address	131 North Columbus Innerbelt
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Test Personnel	
Name	Mathew Santiago
Title	EMC Test Engineer
Signature	

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Revision	Date	Description	Revised By
N/C	##############	Initial Release	Mathew Santiago

Contents

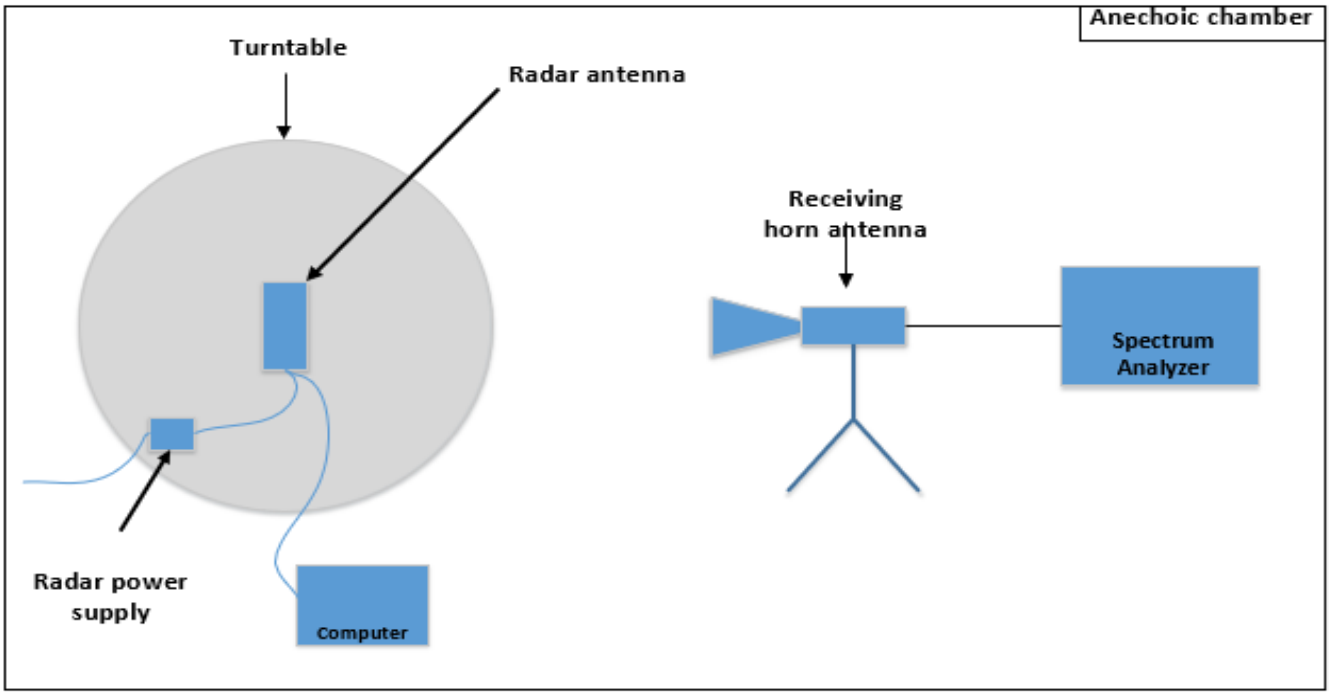
Test Setup Diagram..... 4

Test Equipment Utilized..... 4

Frequency Characteristics Test Results..... 5

Test Setup Diagram

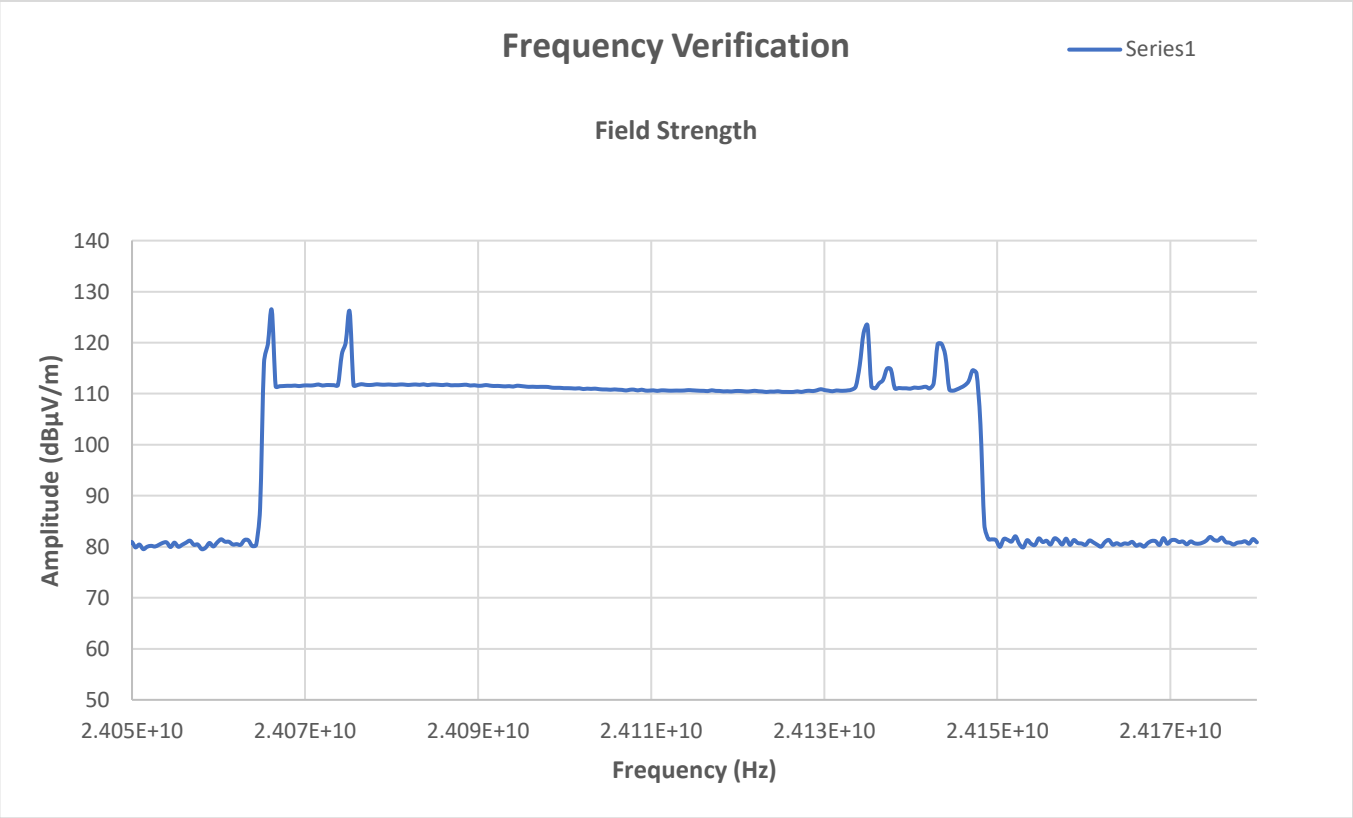




Test Equipment Utilized

Description	Manufacturer	Model #	Serial #	Asset #	Cal. Due Date
EMC Analyzer	Agilent	E7405	US40240238	EB046	1/29/2026
DRG Horn Antenna	ETS Lindgren	3116	00026390	EE017	5/21/2026
Pre-Amplifier	Keystone Compliance	PA-1	0002	EG003	6/30/2026
Turntable Controller	EMCO	1061.2.013	9401-1717	EI009	UWCE

Frequency Measurements:



Frequency Verification					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	126.36	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004889C

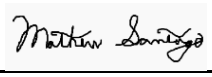
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
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Address	131 North Columbus Innerbelt
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Email	questions@keystonecompliance.com
Web Site	www.keystonecompliance.com

Test Personnel	
Name	Mathew Santiago
Title	EMC Test Engineer
Signature	

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004889C

Date of Issue: November 11, 2025

This speed measuring device has been tested and verified to be functioning in accordance with the manufacture's specifications.

The frequency measurements performed and reported within this report demonstrate that the SmartMicro UMRR-11 T44 radar system has an accuracy of less than or equal to 1 mph up to 100 mph and 1% accuracy thereafter up to 199 mph maximum.

FSK Frequency Set 1					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	126.36	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Test Report

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004C146

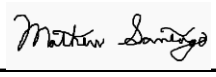
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
1150 N. Alma School Rd
Mesa, AZ 85201

Attention of: **Engineering Department**
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Address	131 North Columbus Innerbelt
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Web Site	www.keystonecompliance.com

Test Personnel	
Name	Mathew Santiago
Title	EMC Test Engineer
Signature	

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Revision	Date	Description	Revised By
N/C	##############	Initial Release	Mathew Santiago

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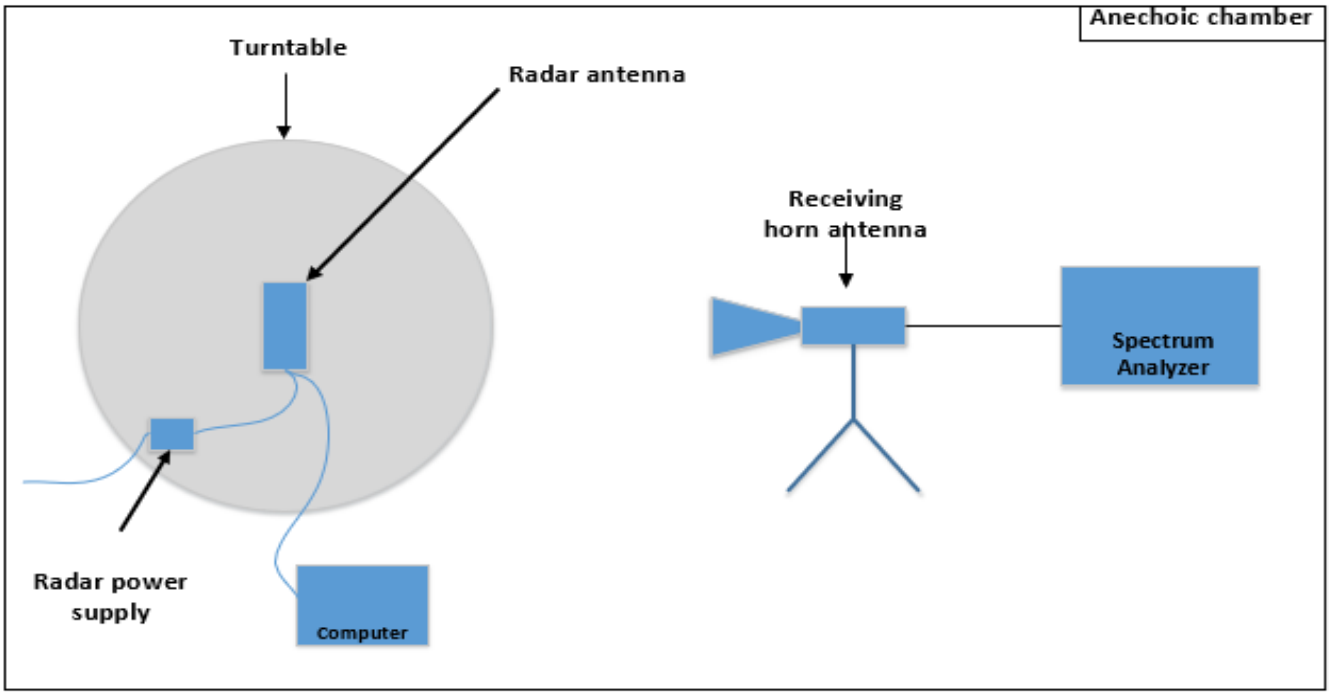
Test Setup Diagram..... 4

Test Equipment Utilized..... 4

Frequency Characteristics Test Results..... 5

Test Setup Diagram

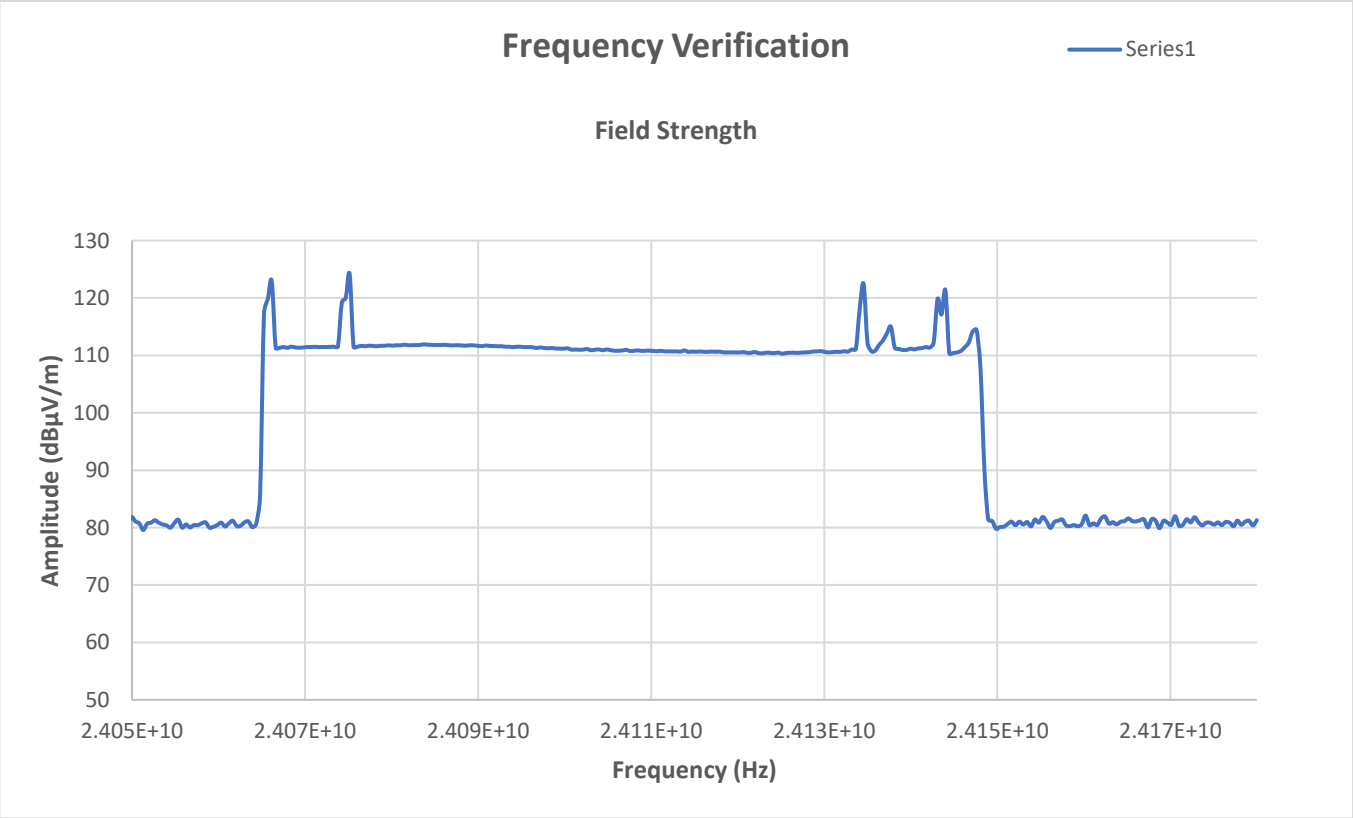




Test Equipment Utilized

Description	Manufacturer	Model #	Serial #	Asset #	Cal. Due Date
EMC Analyzer	Agilent	E7405	US40240238	EB046	1/29/2026
DRG Horn Antenna	ETS Lindgren	3116	00026390	EE017	5/21/2026
Pre-Amplifier	Keystone Compliance	PA-1	0002	EG003	6/30/2026
Turntable Controller	EMCO	1061.2.013	9401-1717	EI009	UWCE

Frequency Measurements:



Frequency Verification					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	124.18	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004C146

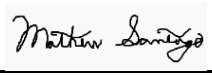
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

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	Applus+ Keystone
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	Mathew Santiago
Title	EMC Test Engineer
Signature	

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004C146

Date of Issue: November 11, 2025

This speed measuring device has been tested and verified to be functioning in accordance with the manufacture's specifications.

The frequency measurements performed and reported within this report demonstrate that the SmartMicro UMRR-11 T44 radar system has an accuracy of less than or equal to 1 mph up to 100 mph and 1% accuracy thereafter up to 199 mph maximum.

FSK Frequency Set 1					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	124.18	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Test Report

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004EC2A

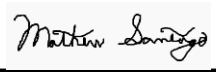
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

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	Applus + Keystone
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	Mathew Santiago
Title	EMC Test Engineer
Signature	

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Revision	Date	Description	Revised By
N/C	##############	Initial Release	Mathew Santiago

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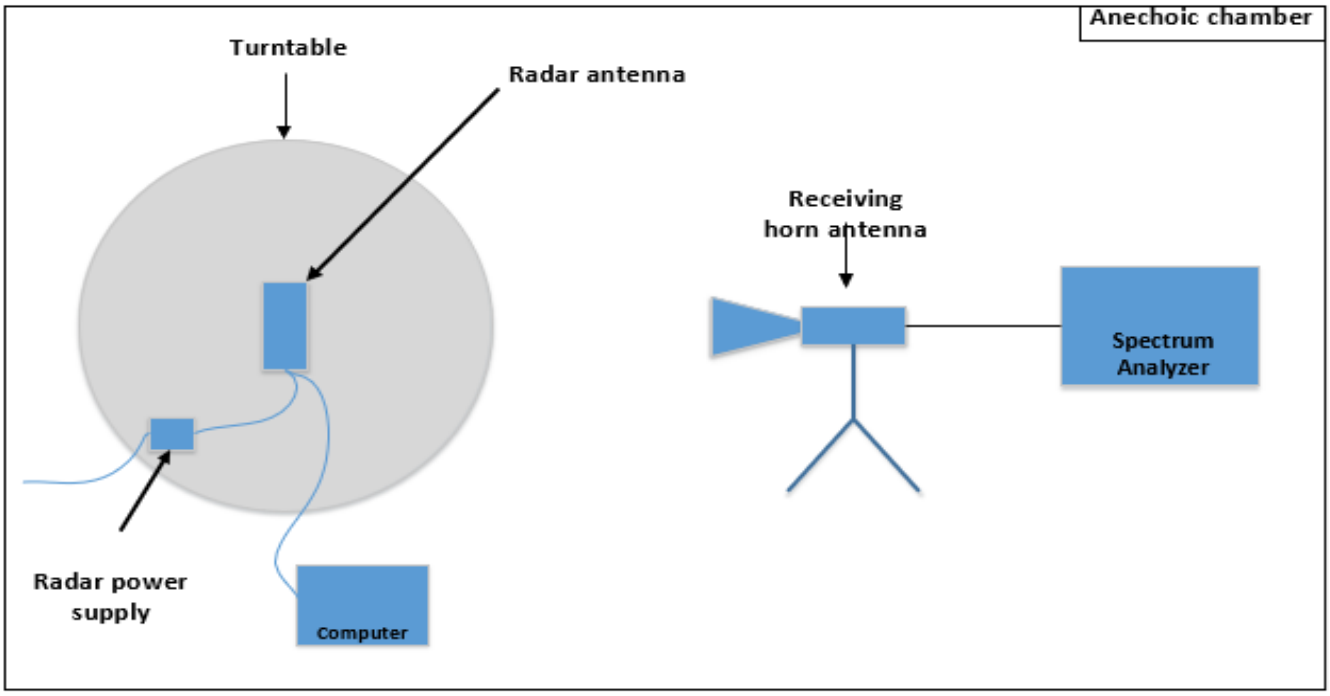
Test Setup Diagram..... 4

Test Equipment Utilized..... 4

Frequency Characteristics Test Results..... 5

Test Setup Diagram

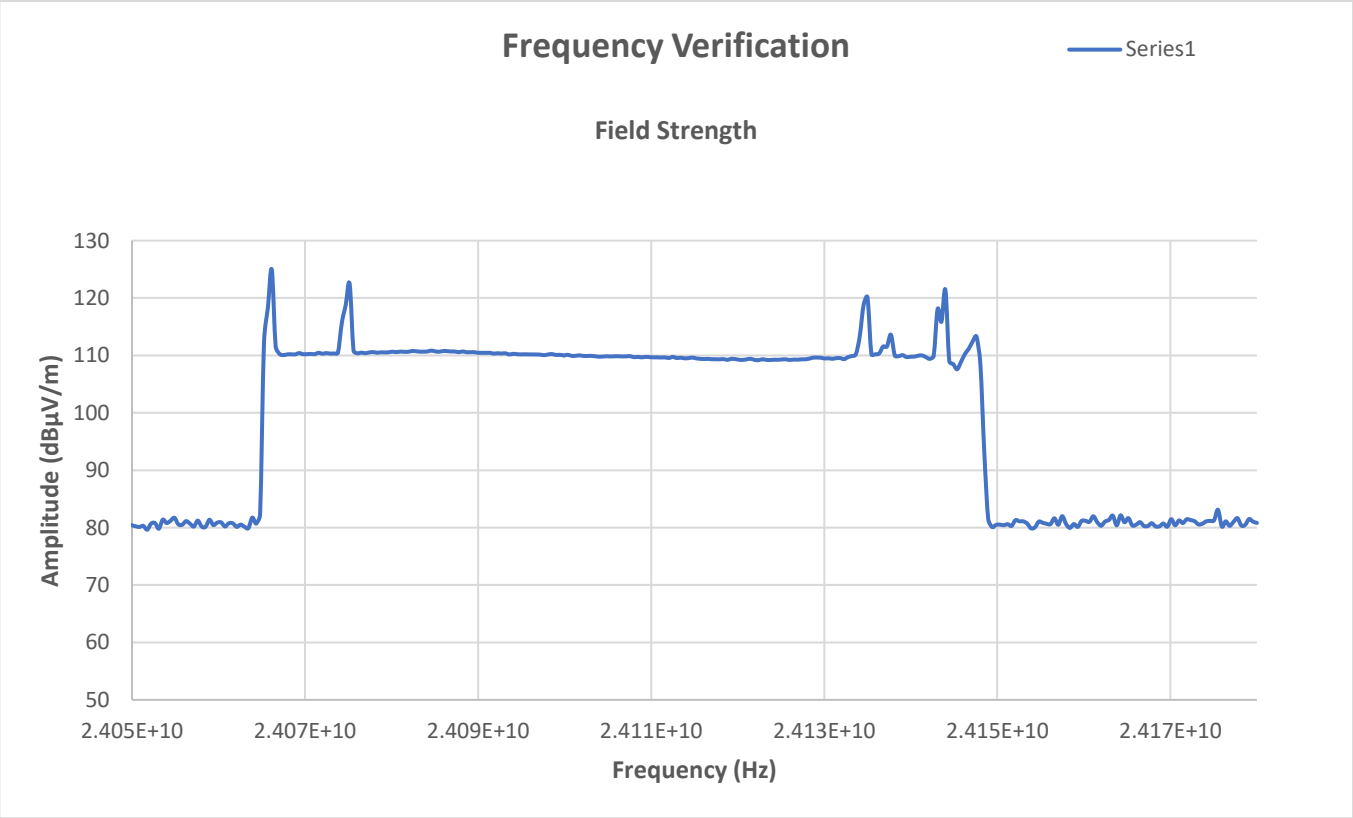




Test Equipment Utilized

Description	Manufacturer	Model #	Serial #	Asset #	Cal. Due Date
EMC Analyzer	Agilent	E7405	US40240238	EB046	1/29/2026
DRG Horn Antenna	ETS Lindgren	3116	00026390	EE017	5/21/2026
Pre-Amplifier	Keystone Compliance	PA-1	0002	EG003	6/30/2026
Turntable Controller	EMCO	1061.2.013	9401-1717	EI009	UWCE

Frequency Measurements:



Frequency Verification					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	124.94	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004EC2A

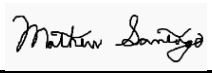
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
1150 N. Alma School Rd
Mesa, AZ 85201

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

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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	Mathew Santiago
Title	EMC Test Engineer
Signature	

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004EC2A

Date of Issue: November 11, 2025

This speed measuring device has been tested and verified to be functioning in accordance with the manufacture's specifications.

The frequency measurements performed and reported within this report demonstrate that the SmartMicro UMRR-11 T44 radar system has an accuracy of less than or equal to 1 mph up to 100 mph and 1% accuracy thereafter up to 199 mph maximum.

FSK Frequency Set 1					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	124.94	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Test Report

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004EC26

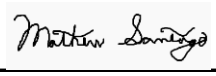
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
1150 N. Alma School Rd
Mesa, AZ 85201

Attention of: **Engineering Department**
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Test Personnel	
Name	Mathew Santiago
Title	EMC Test Engineer
Signature	

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Revision	Date	Description	Revised By
N/C	##############	Initial Release	Mathew Santiago

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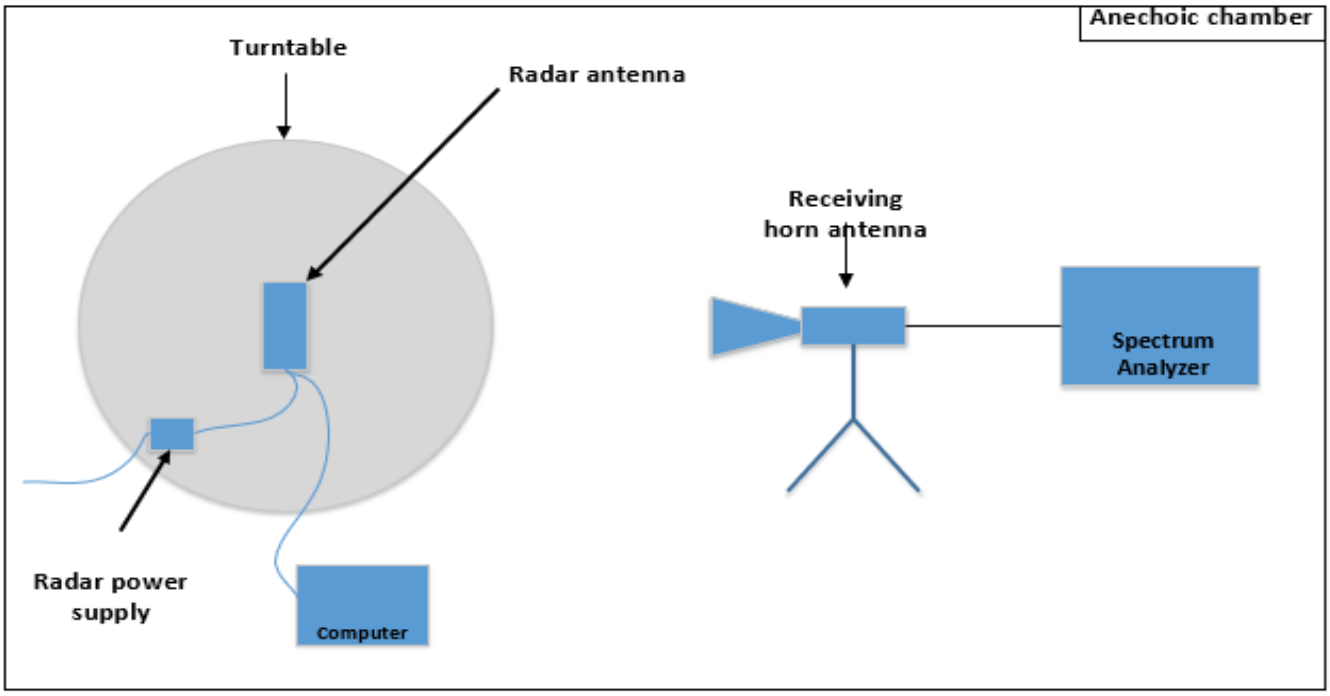
Test Setup Diagram..... 4

Test Equipment Utilized..... 4

Frequency Characteristics Test Results..... 5

Test Setup Diagram

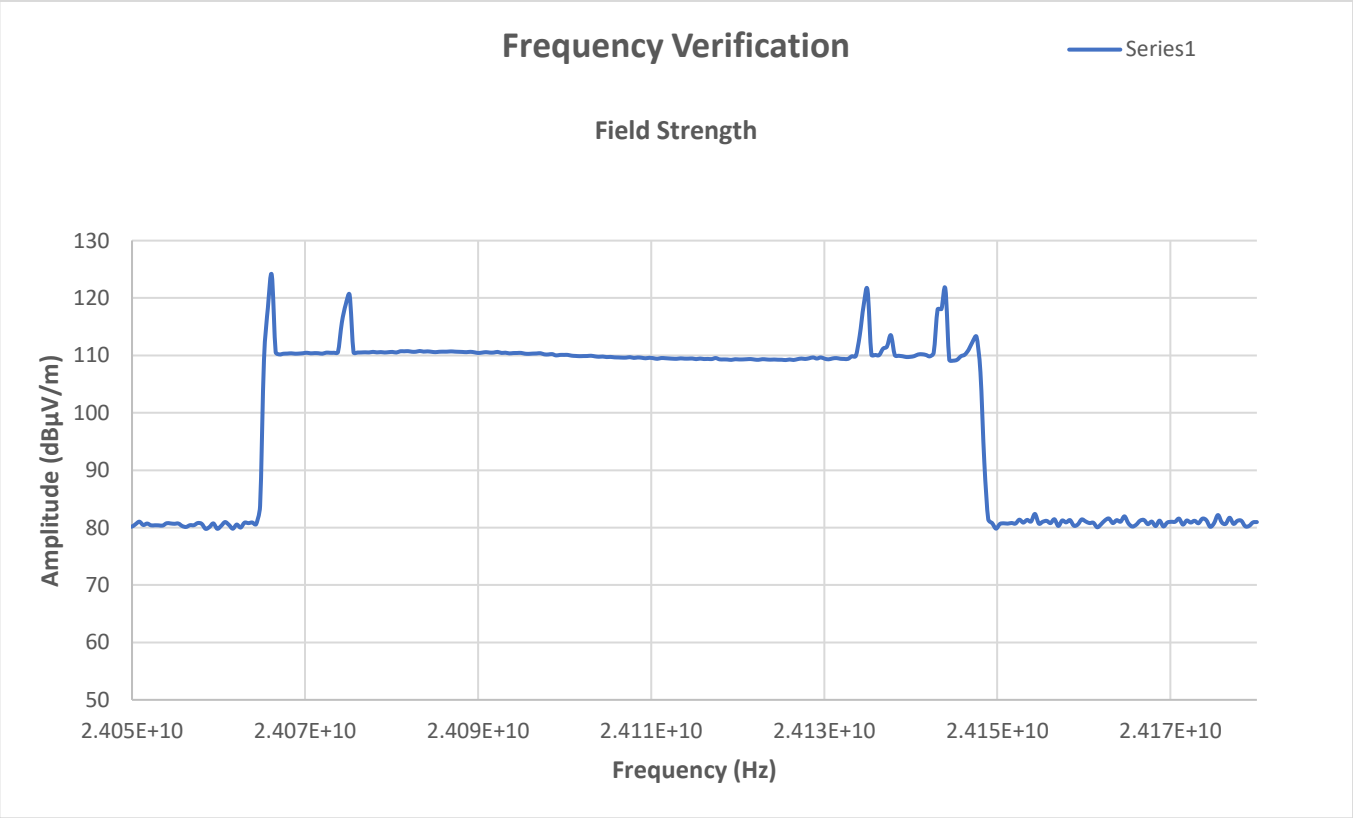




Test Equipment Utilized

Description	Manufacturer	Model #	Serial #	Asset #	Cal. Due Date
EMC Analyzer	Agilent	E7405	US40240238	EB046	1/29/2026
DRG Horn Antenna	ETS Lindgren	3116	00026390	EE017	5/21/2026
Pre-Amplifier	Keystone Compliance	PA-1	0002	EG003	6/30/2026
Turntable Controller	EMCO	1061.2.013	9401-1717	EI009	UWCE

Frequency Measurements:



Frequency Verification					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	124.02	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004EC26

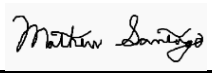
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
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Web Site	www.keystonecompliance.com

Test Personnel	
Name	Mathew Santiago
Title	EMC Test Engineer
Signature	

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004EC26

Date of Issue: November 11, 2025

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FSK Frequency Set 1					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	124.02	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Test Report

Model: UMRR-11 T44

Part Number / Serial Number:
0x00049025

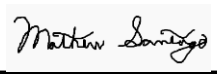
Description:
Radar Characteristics Validation
In compliance with:
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Date of Issue: November 11, 2025

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Test Personnel	
Name	Mathew Santiago
Title	EMC Test Engineer
Signature	

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Revision	Date	Description	Revised By
N/C	##############	Initial Release	Mathew Santiago

Contents

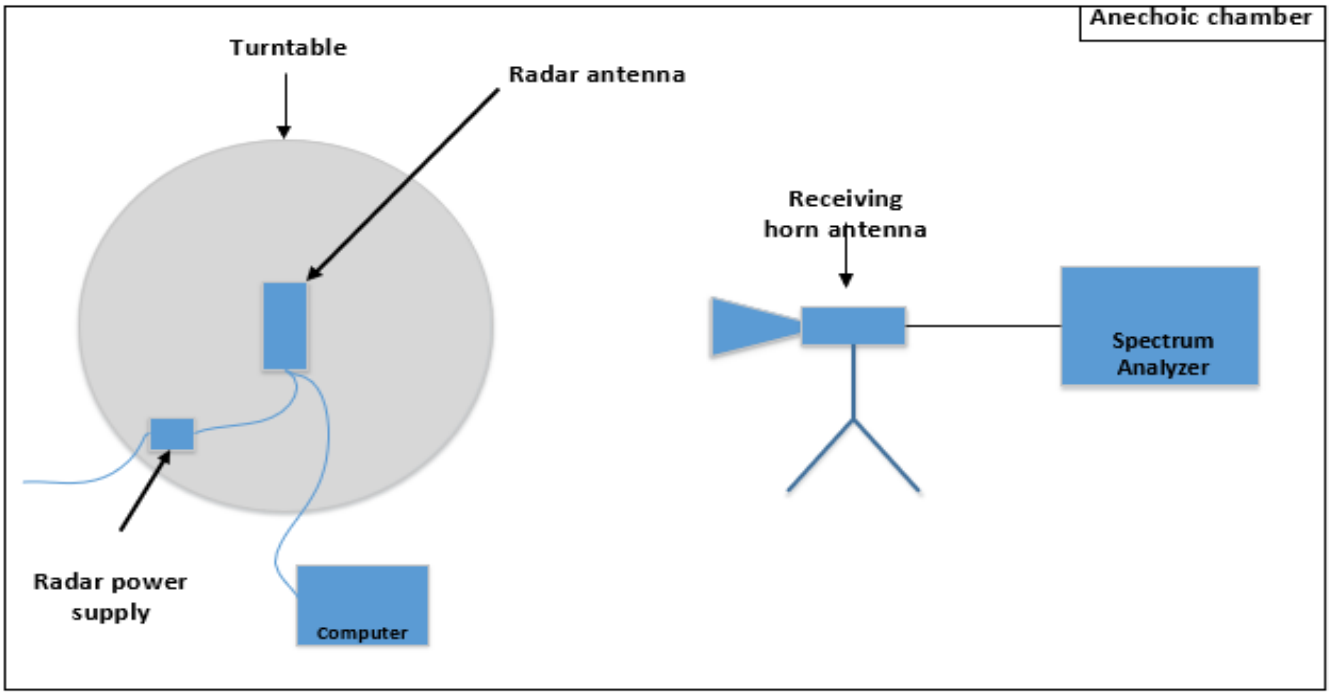
Test Setup Diagram..... 4

Test Equipment Utilized..... 4

Frequency Characteristics Test Results..... 5

Test Setup Diagram

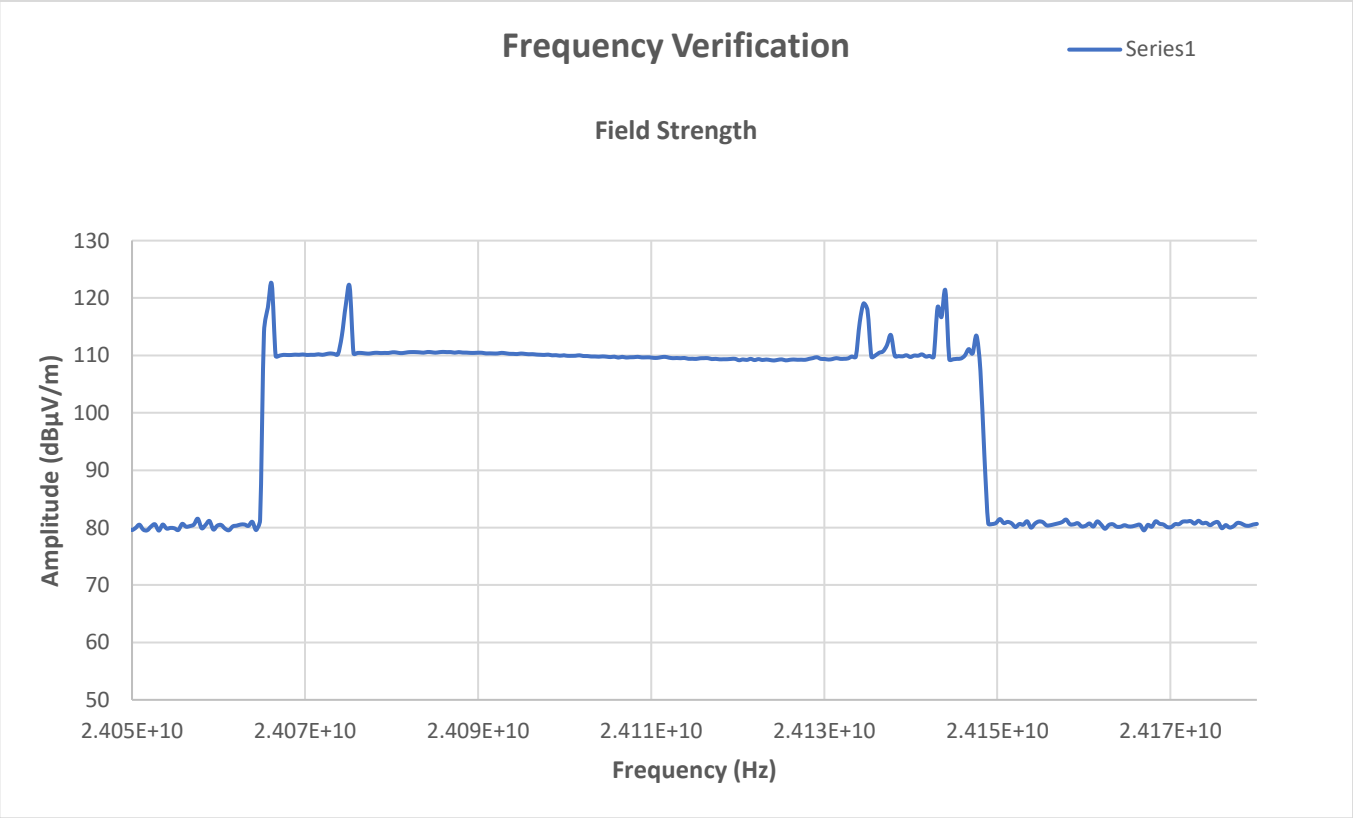




Test Equipment Utilized

Description	Manufacturer	Model #	Serial #	Asset #	Cal. Due Date
EMC Analyzer	Agilent	E7405	US40240238	EB046	1/29/2026
DRG Horn Antenna	ETS Lindgren	3116	00026390	EE017	5/21/2026
Pre-Amplifier	Keystone Compliance	PA-1	0002	EG003	6/30/2026
Turntable Controller	EMCO	1061.2.013	9401-1717	EI009	UWCE

Frequency Measurements:



Frequency Verification					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	122.40	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x00049025

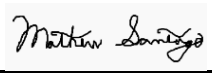
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

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	Applus+ Keystone
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	Mathew Santiago
Title	EMC Test Engineer
Signature	

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x00049025

Date of Issue: November 11, 2025

This speed measuring device has been tested and verified to be functioning in accordance with the manufacture's specifications.

The frequency measurements performed and reported within this report demonstrate that the SmartMicro UMRR-11 T44 radar system has an accuracy of less than or equal to 1 mph up to 100 mph and 1% accuracy thereafter up to 199 mph maximum.

FSK Frequency Set 1					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	122.40	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Test Report

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004893E

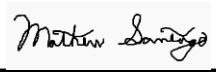
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
1150 N. Alma School Rd
Mesa, AZ 85201

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

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Name	Mathew Santiago
Title	EMC Test Engineer
Signature	

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N/C	##############	Initial Release	Mathew Santiago

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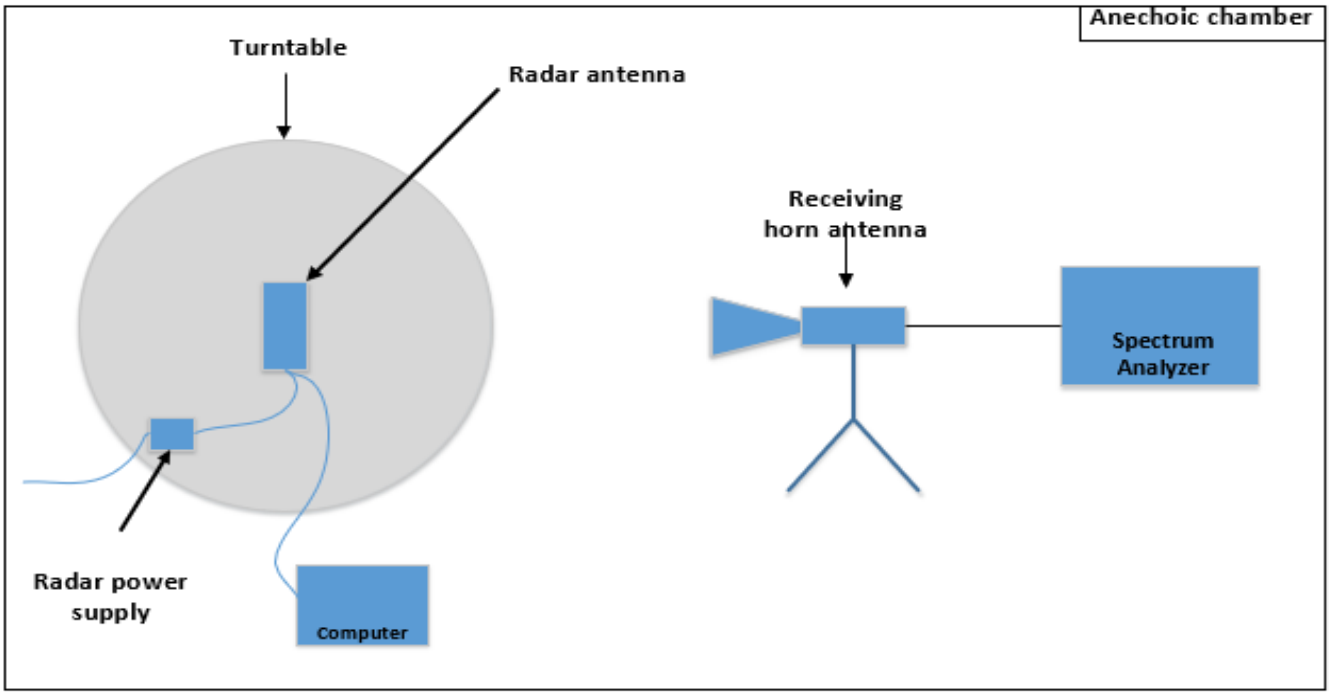
Test Setup Diagram..... 4

Test Equipment Utilized..... 4

Frequency Characteristics Test Results..... 5

Test Setup Diagram

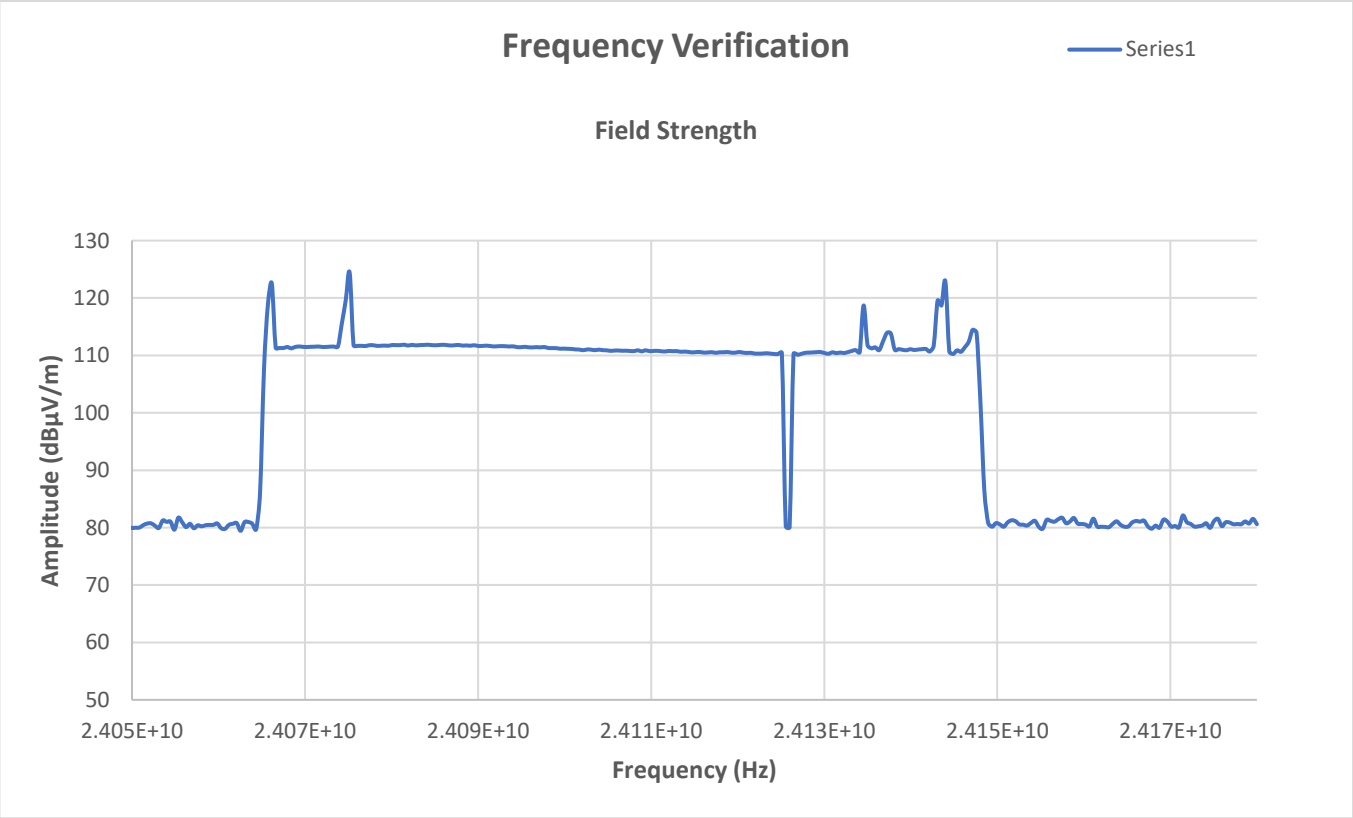




Test Equipment Utilized

Description	Manufacturer	Model #	Serial #	Asset #	Cal. Due Date
EMC Analyzer	Agilent	E7405	US40240238	EB046	1/29/2026
DRG Horn Antenna	ETS Lindgren	3116	00026390	EE017	5/21/2026
Pre-Amplifier	Keystone Compliance	PA-1	0002	EG003	6/30/2026
Turntable Controller	EMCO	1061.2.013	9401-1717	EI009	UWCE

Frequency Measurements:



Frequency Verification					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	124.44	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004893E

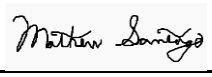
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
1150 N. Alma School Rd
Mesa, AZ 85201

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Address	131 North Columbus Innerbelt
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Email	questions@keystonecompliance.com
Web Site	www.keystonecompliance.com

Test Personnel	
Name	Mathew Santiago
Title	EMC Test Engineer
Signature	

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004893E

Date of Issue: November 11, 2025

This speed measuring device has been tested and verified to be functioning in accordance with the manufacture's specifications.

The frequency measurements performed and reported within this report demonstrate that the SmartMicro UMRR-11 T44 radar system has an accuracy of less than or equal to 1 mph up to 100 mph and 1% accuracy thereafter up to 199 mph maximum.

FSK Frequency Set 1					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	124.44	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Test Report

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004B5CE

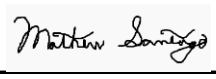
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
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Name	Mathew Santiago
Title	EMC Test Engineer
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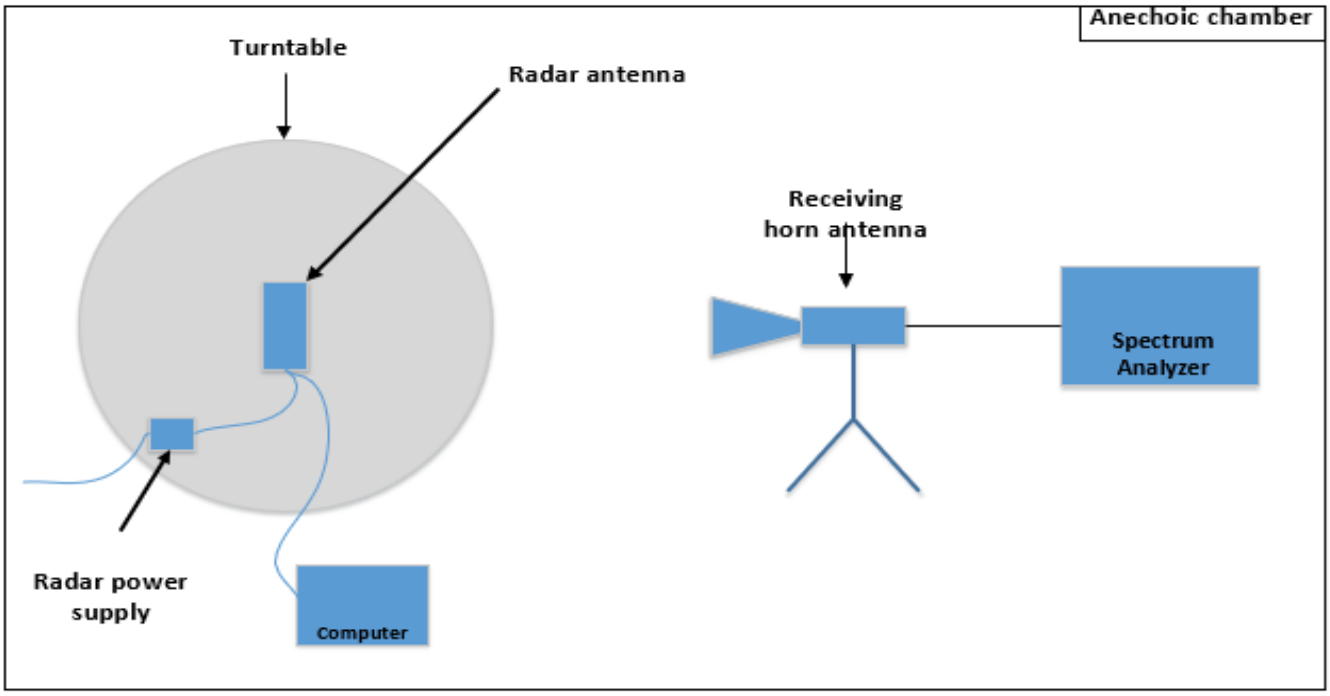
Test Setup Diagram..... 4

Test Equipment Utilized..... 4

Frequency Characteristics Test Results..... 5

Test Setup Diagram

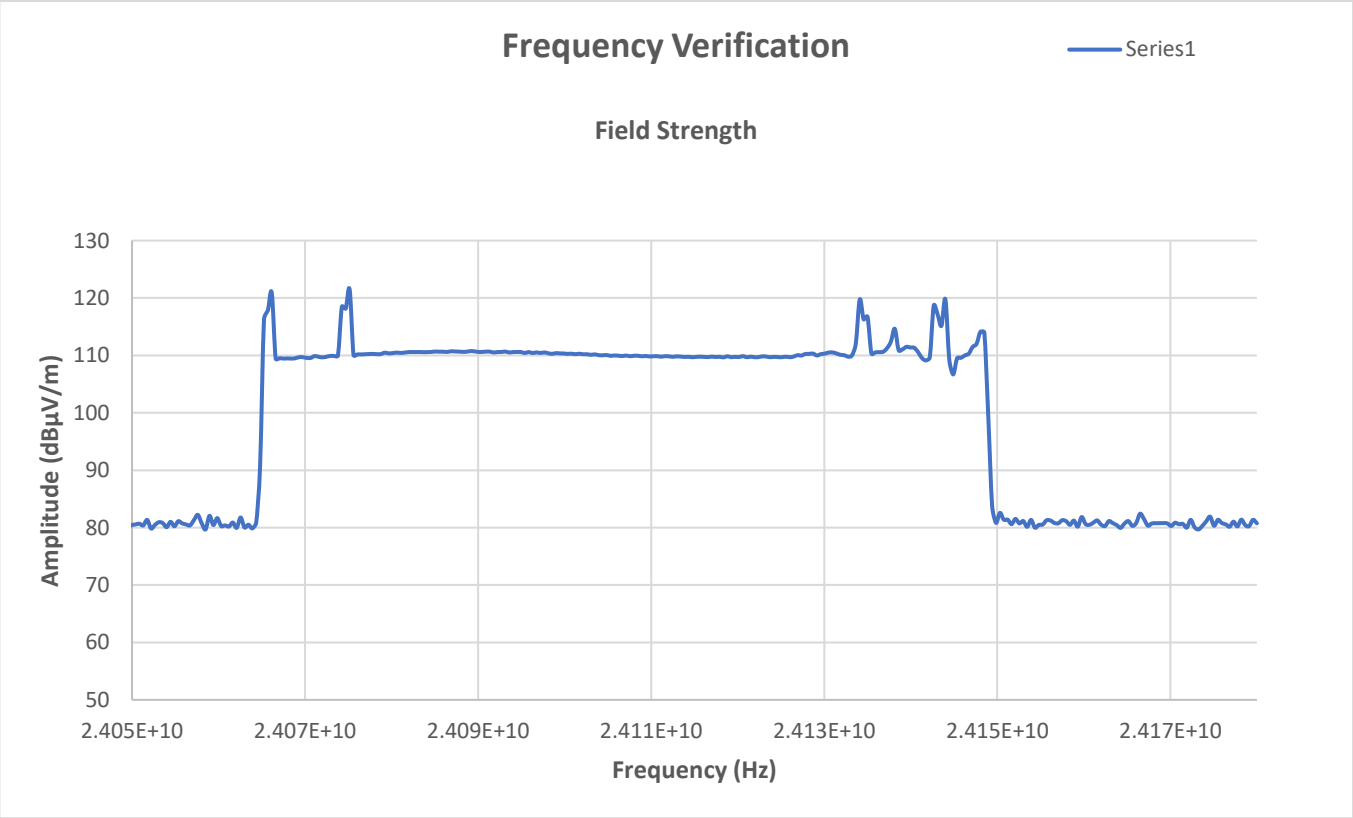




Test Equipment Utilized

Description	Manufacturer	Model #	Serial #	Asset #	Cal. Due Date
EMC Analyzer	Agilent	E7405	US40240238	EB046	1/29/2026
DRG Horn Antenna	ETS Lindgren	3116	00026390	EE017	5/21/2026
Pre-Amplifier	Keystone Compliance	PA-1	0002	EG003	6/30/2026
Turntable Controller	EMCO	1061.2.013	9401-1717	EI009	UWCE

Frequency Measurements:



Frequency Verification					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	83.3	121.49	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004B5CE

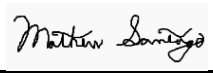
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
1150 N. Alma School Rd
Mesa, AZ 85201

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

Test Facility	
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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	Mathew Santiago
Title	EMC Test Engineer
Signature	

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004B5CE

Date of Issue: November 11, 2025

This speed measuring device has been tested and verified to be functioning in accordance with the manufacture's specifications.

The frequency measurements performed and reported within this report demonstrate that the SmartMicro UMRR-11 T44 radar system has an accuracy of less than or equal to 1 mph up to 100 mph and 1% accuracy thereafter up to 199 mph maximum.

FSK Frequency Set 1					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	83.3	121.49	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Test Report

Model: UMRR-11 T44

Part Number / Serial Number:
0x00048851

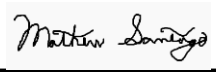
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
1150 N. Alma School Rd
Mesa, AZ 85201

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Test Personnel	
Name	Mathew Santiago
Title	EMC Test Engineer
Signature	

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N/C	##############	Initial Release	Mathew Santiago

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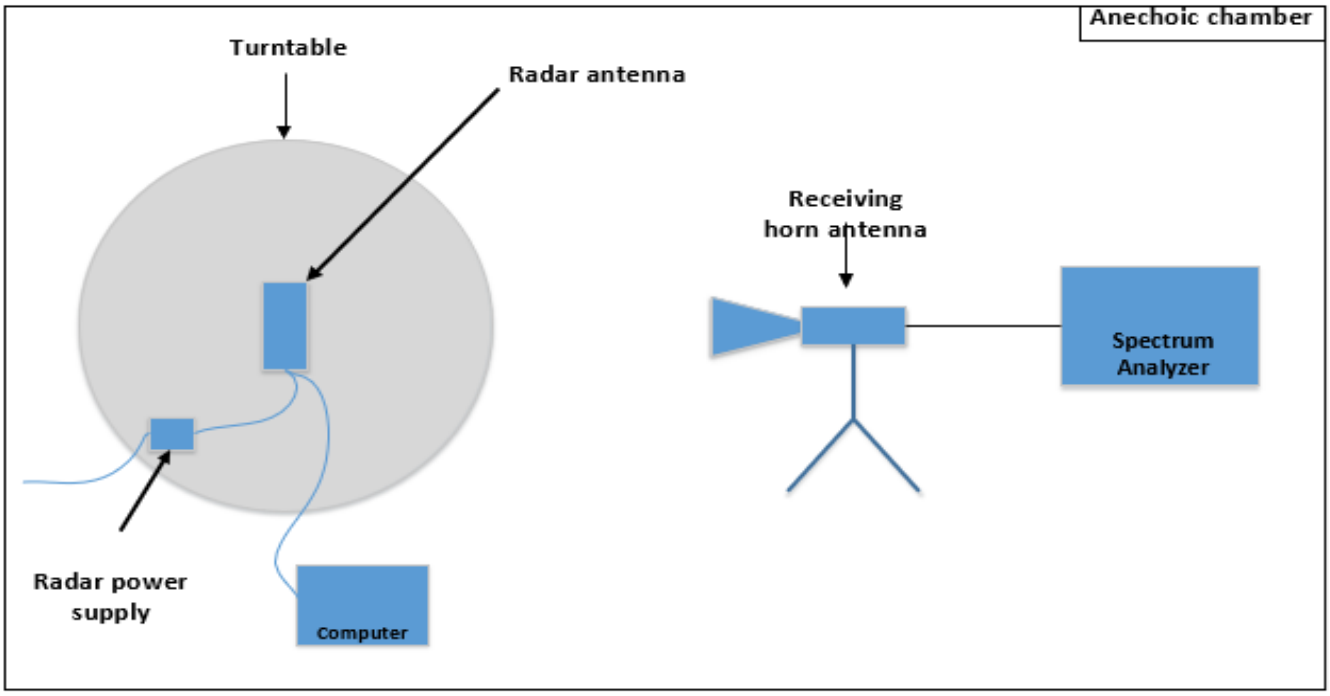
Test Setup Diagram..... 4

Test Equipment Utilized..... 4

Frequency Characteristics Test Results..... 5

Test Setup Diagram

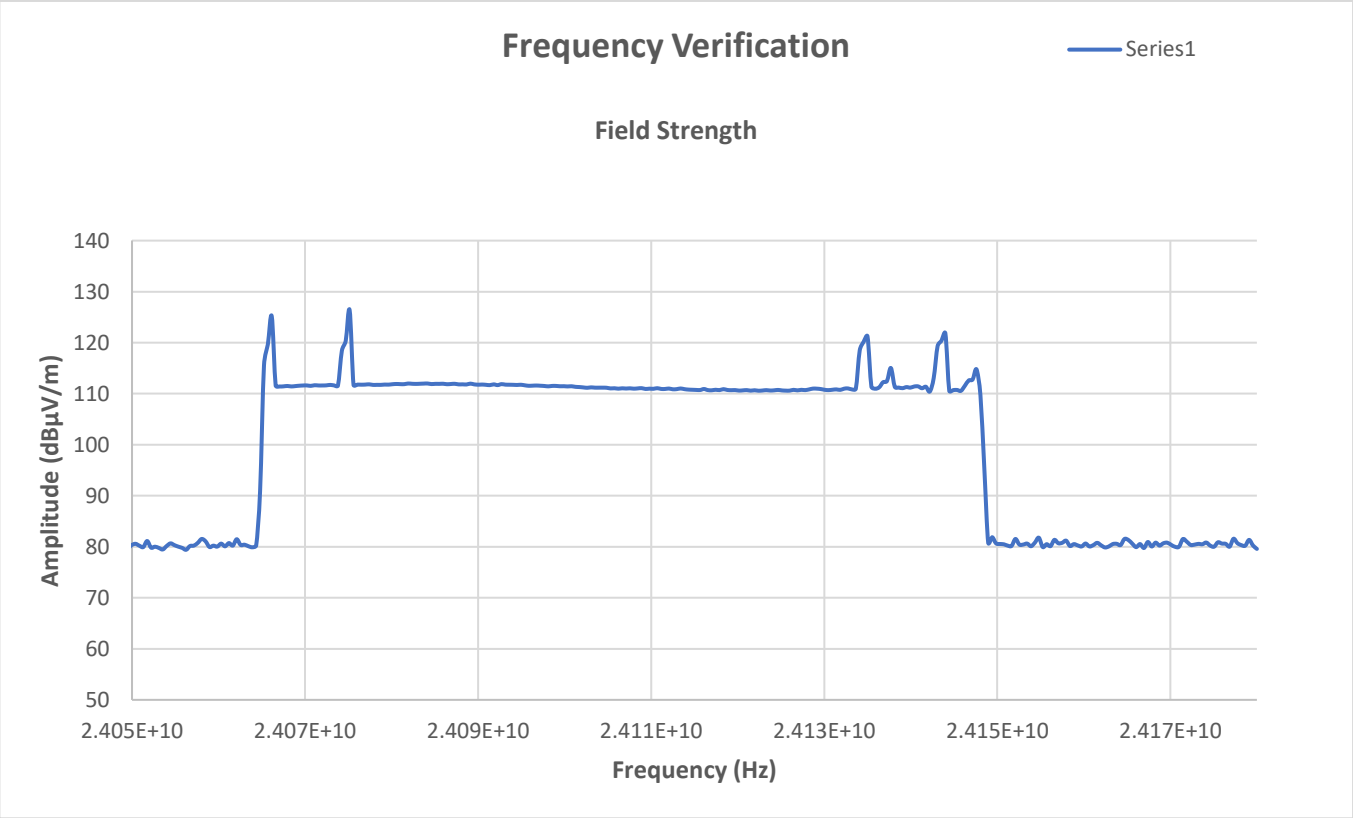




Test Equipment Utilized

Description	Manufacturer	Model #	Serial #	Asset #	Cal. Due Date
EMC Analyzer	Agilent	E7405	US40240238	EB046	1/29/2026
DRG Horn Antenna	ETS Lindgren	3116	00026390	EE017	5/21/2026
Pre-Amplifier	Keystone Compliance	PA-1	0002	EG003	6/30/2026
Turntable Controller	EMCO	1061.2.013	9401-1717	EI009	UWCE

Frequency Measurements:



Frequency Verification					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	126.36	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x00048851

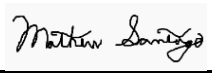
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

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	Applus+ Keystone
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	Mathew Santiago
Title	EMC Test Engineer
Signature	

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x00048851

Date of Issue: November 11, 2025

This speed measuring device has been tested and verified to be functioning in accordance with the manufacture's specifications.

The frequency measurements performed and reported within this report demonstrate that the SmartMicro UMRR-11 T44 radar system has an accuracy of less than or equal to 1 mph up to 100 mph and 1% accuracy thereafter up to 199 mph maximum.

FSK Frequency Set 1					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	126.36	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Test Report

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004901D

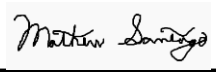
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
1150 N. Alma School Rd
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Attention of: **Engineering Department**
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Test Personnel	
Name	Mathew Santiago
Title	EMC Test Engineer
Signature	

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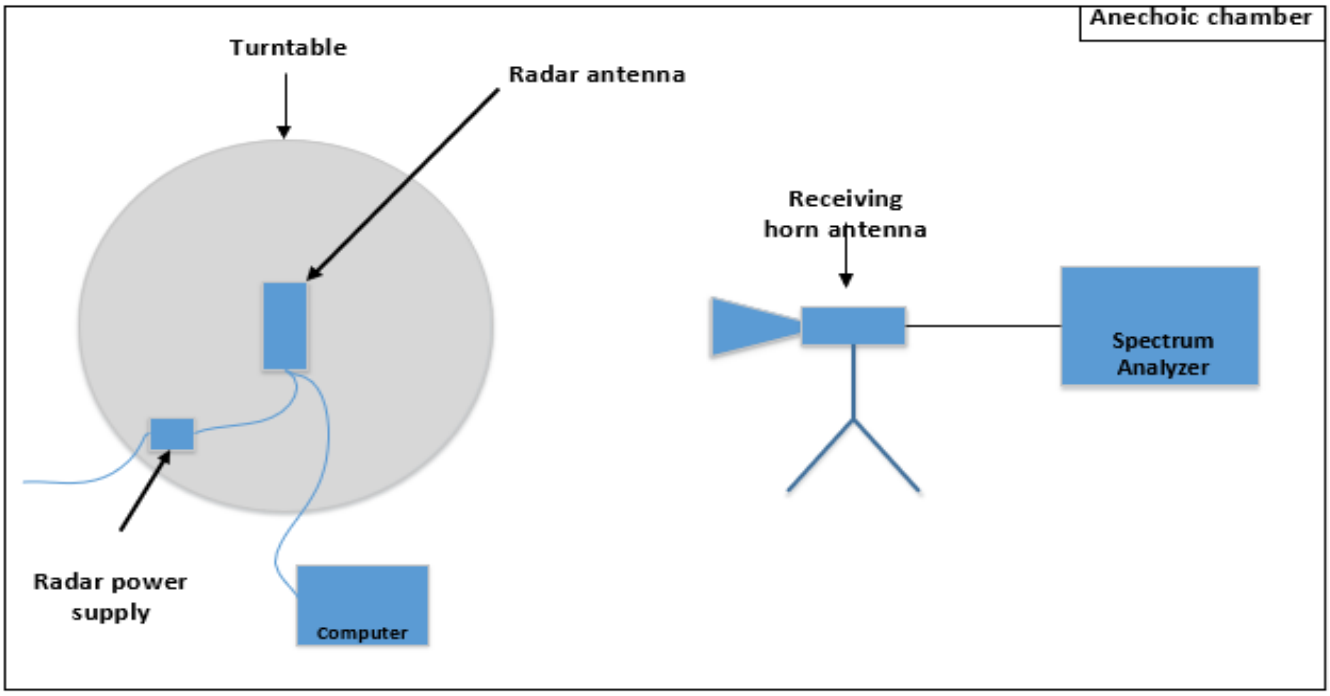
Test Setup Diagram..... 4

Test Equipment Utilized..... 4

Frequency Characteristics Test Results..... 5

Test Setup Diagram

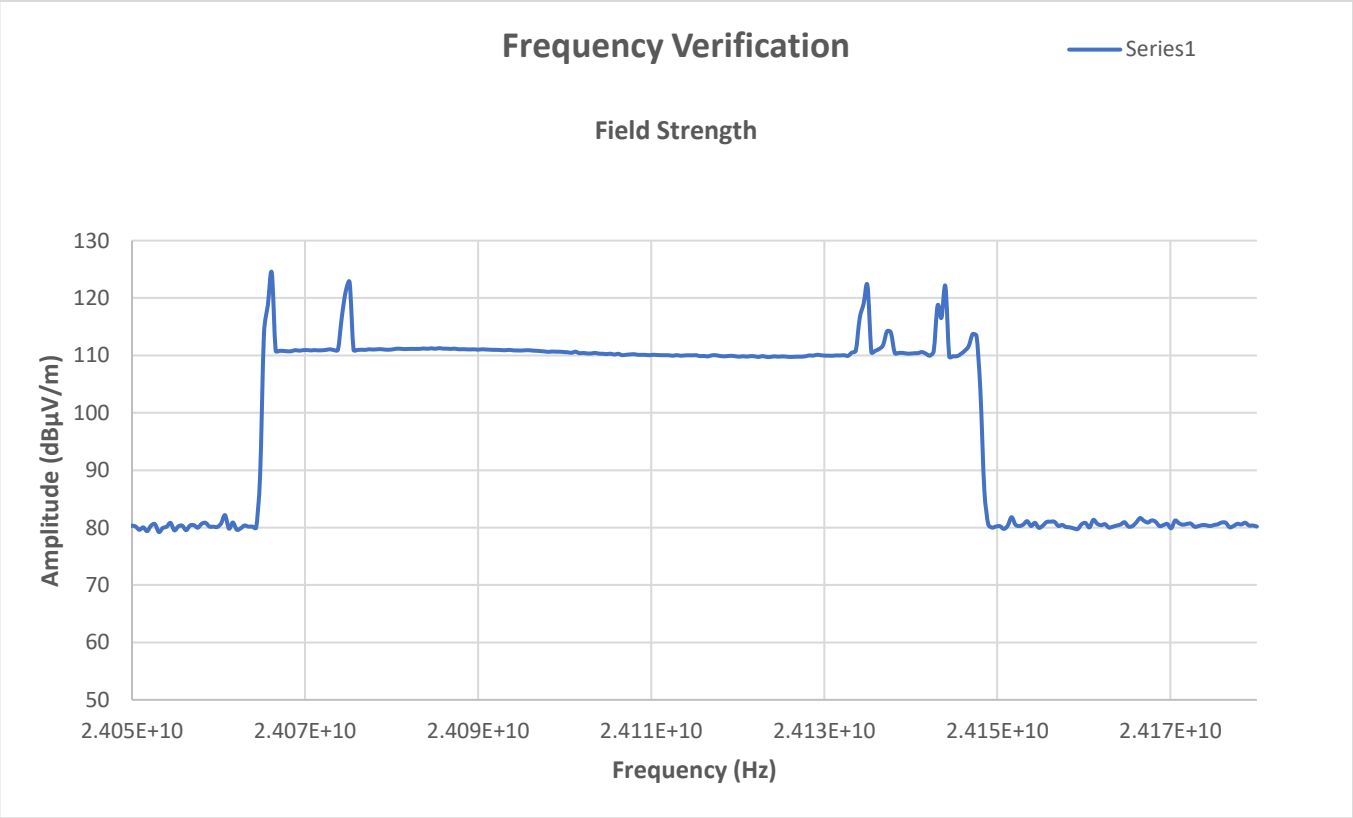




Test Equipment Utilized

Description	Manufacturer	Model #	Serial #	Asset #	Cal. Due Date
EMC Analyzer	Agilent	E7405	US40240238	EB046	1/29/2026
DRG Horn Antenna	ETS Lindgren	3116	00026390	EE017	5/21/2026
Pre-Amplifier	Keystone Compliance	PA-1	0002	EG003	6/30/2026
Turntable Controller	EMCO	1061.2.013	9401-1717	EI009	UWCE

Frequency Measurements:



Frequency Verification					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	124.41	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004901D

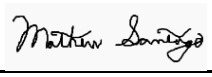
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
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Mesa, AZ 85201

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Phone: (480) 443-7000

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

Test Personnel	
Name	Mathew Santiago
Title	EMC Test Engineer
Signature	

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004901D

Date of Issue: November 11, 2025

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The frequency measurements performed and reported within this report demonstrate that the SmartMicro UMRR-11 T44 radar system has an accuracy of less than or equal to 1 mph up to 100 mph and 1% accuracy thereafter up to 199 mph maximum.

FSK Frequency Set 1					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	124.41	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Test Report

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004ED38

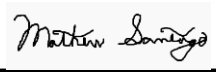
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In compliance with:
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Date of Issue: November 11, 2025

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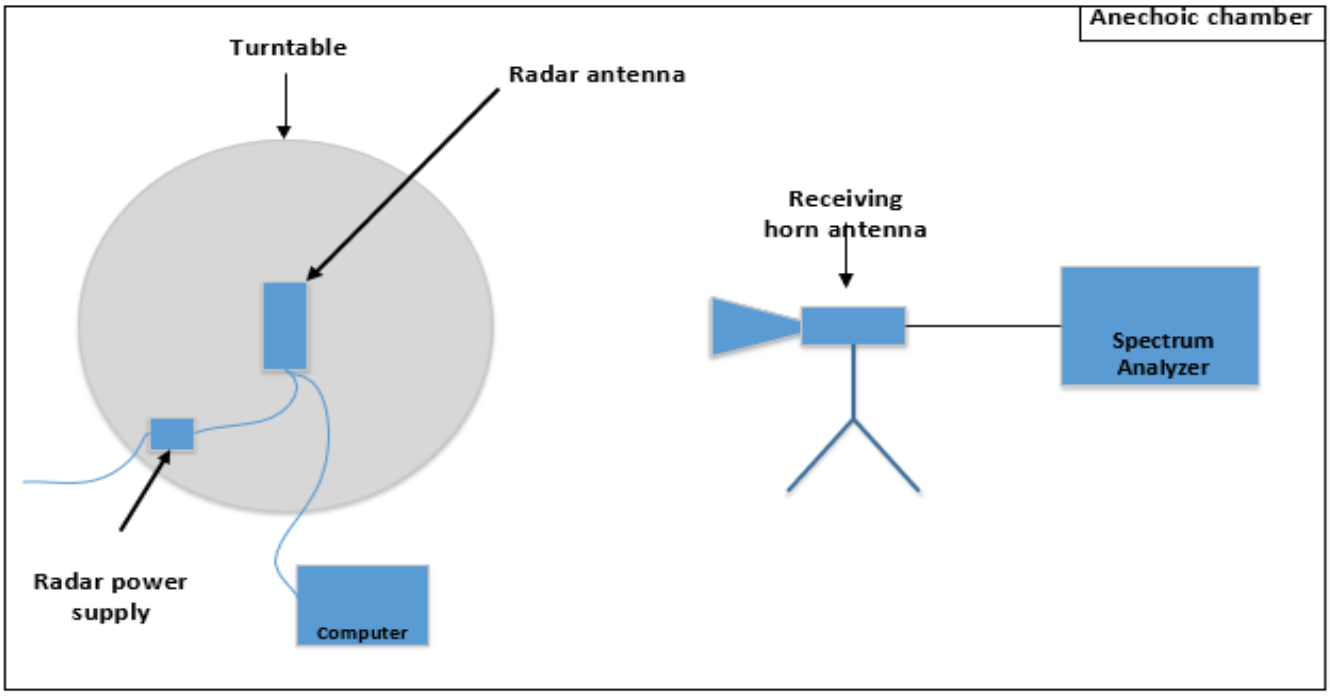
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Test Equipment Utilized..... 4

Frequency Characteristics Test Results..... 5

Test Setup Diagram

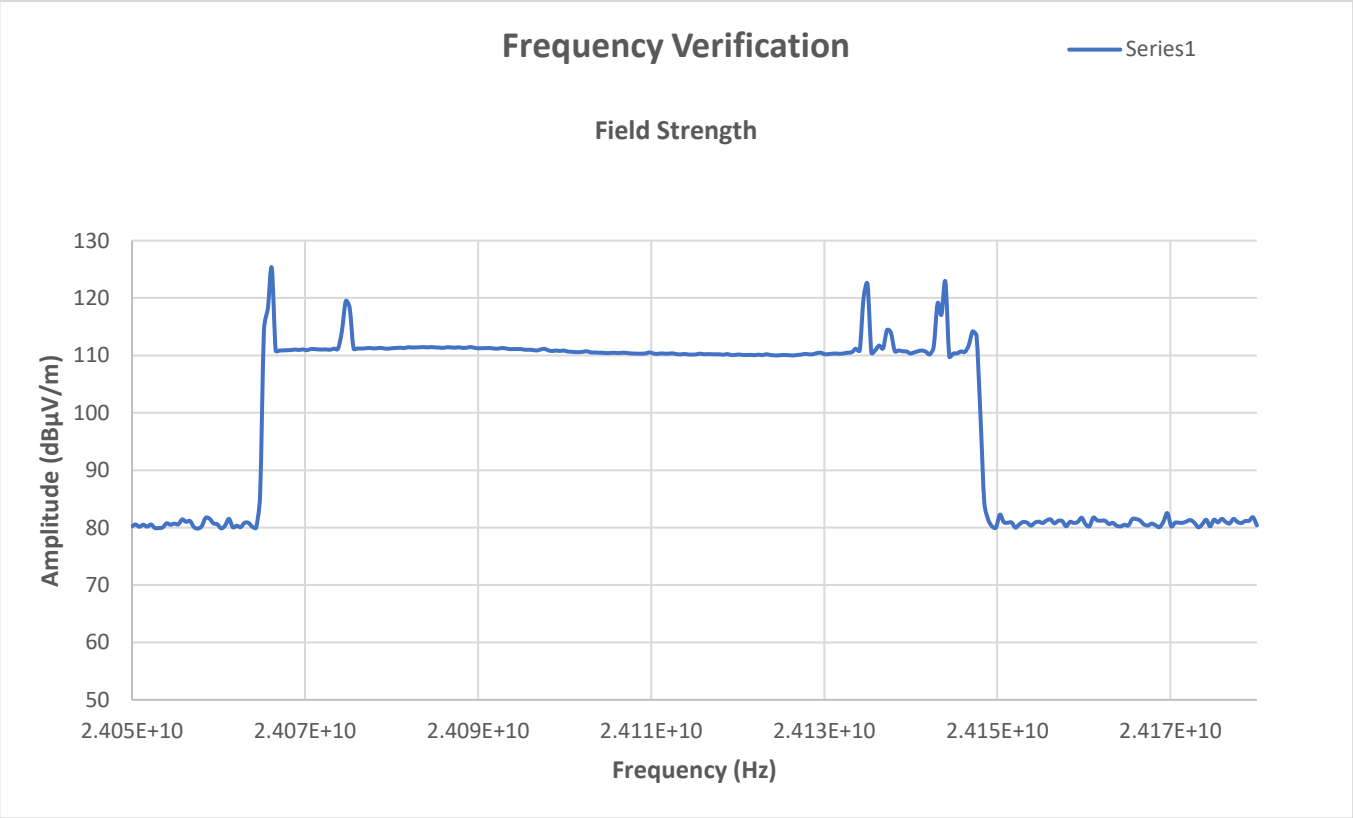




Test Equipment Utilized

Description	Manufacturer	Model #	Serial #	Asset #	Cal. Due Date
EMC Analyzer	Agilent	E7405	US40240238	EB046	1/29/2026
DRG Horn Antenna	ETS Lindgren	3116	00026390	EE017	5/21/2026
Pre-Amplifier	Keystone Compliance	PA-1	0002	EG003	6/30/2026
Turntable Controller	EMCO	1061.2.013	9401-1717	EI009	UWCE

Frequency Measurements:



Frequency Verification					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.106	82.4	125.23	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004ED38

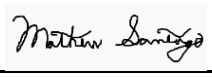
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

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	Applus+ Keystone
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	Mathew Santiago
Title	EMC Test Engineer
Signature	

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004ED38

Date of Issue: November 11, 2025

This speed measuring device has been tested and verified to be functioning in accordance with the manufacture's specifications.

The frequency measurements performed and reported within this report demonstrate that the SmartMicro UMRR-11 T44 radar system has an accuracy of less than or equal to 1 mph up to 100 mph and 1% accuracy thereafter up to 199 mph maximum.

FSK Frequency Set 1					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.106	82.4	125.23	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Test Report

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004ED3B

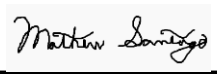
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
1150 N. Alma School Rd
Mesa, AZ 85201

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

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Test Personnel	
Name	Mathew Santiago
Title	EMC Test Engineer
Signature	

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Revision	Date	Description	Revised By
N/C	##############	Initial Release	Mathew Santiago

Contents

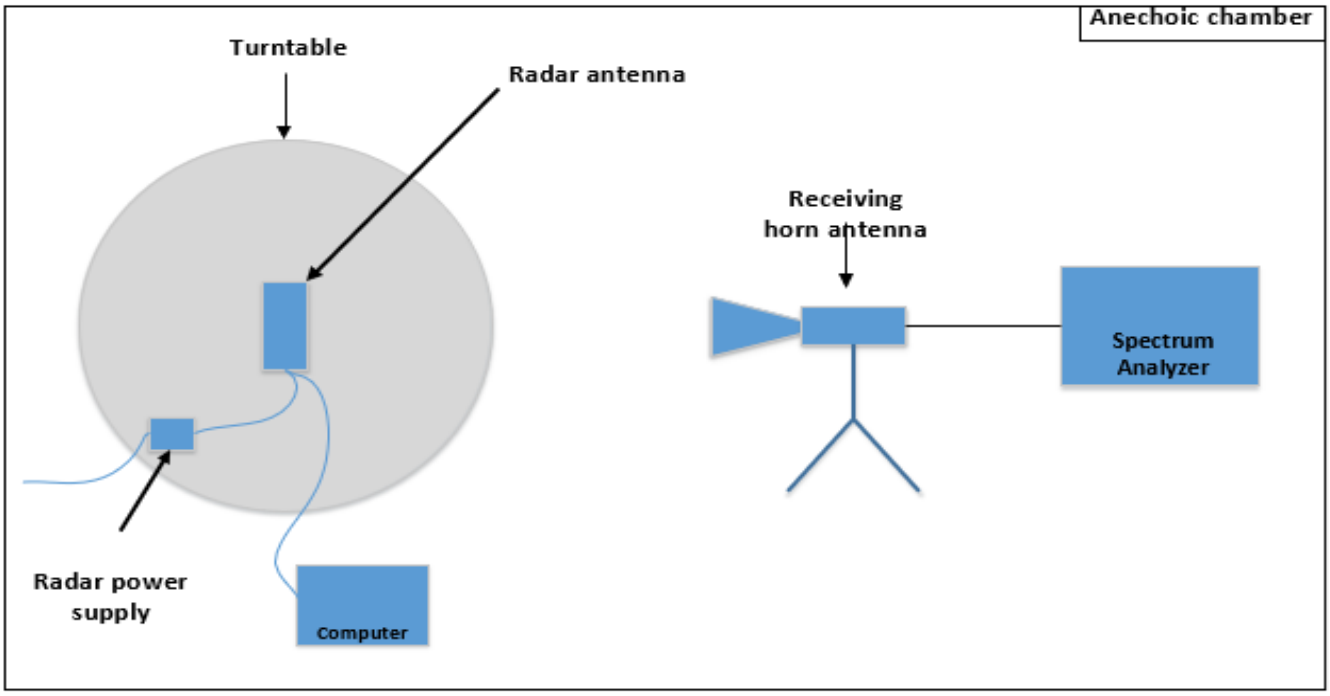
Test Setup Diagram..... 4

Test Equipment Utilized..... 4

Frequency Characteristics Test Results..... 5

Test Setup Diagram

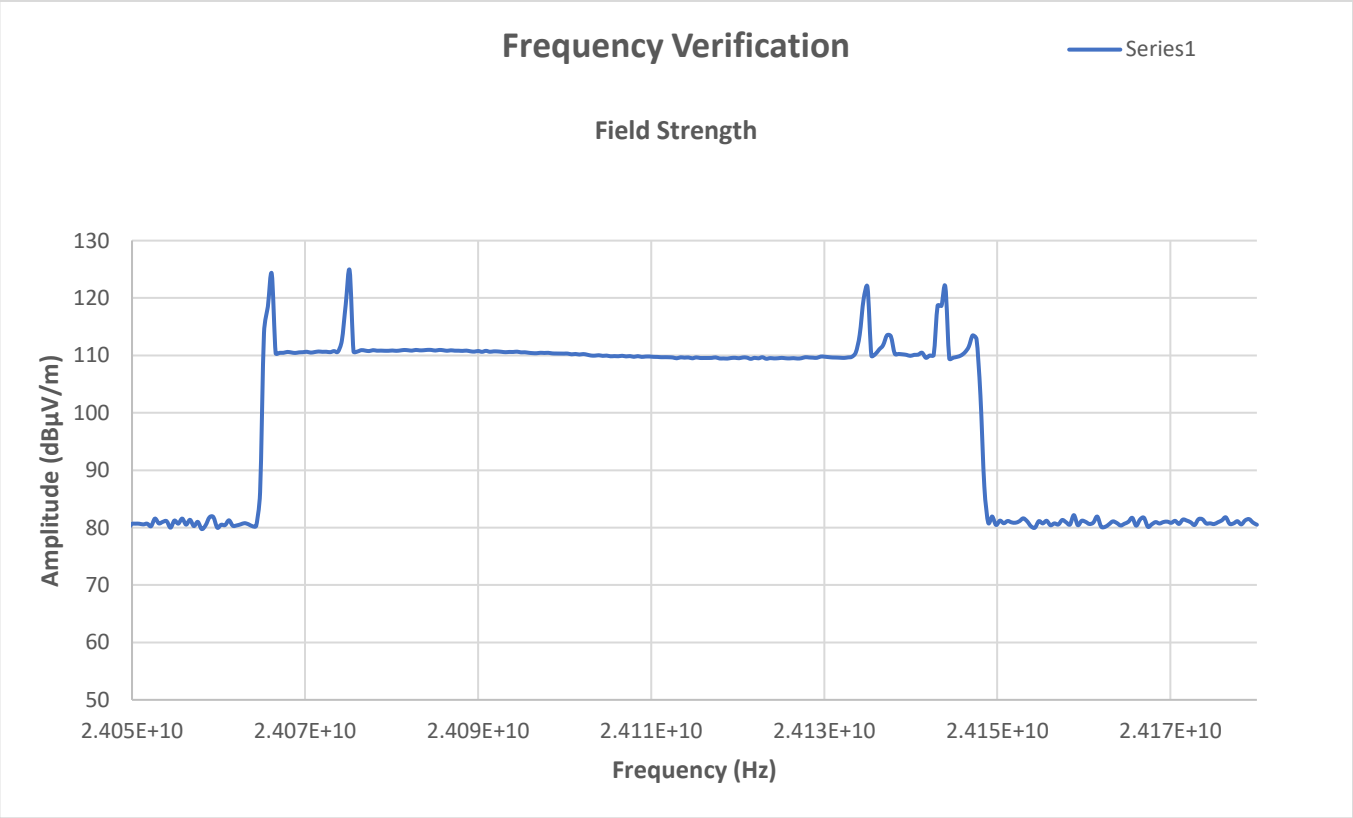




Test Equipment Utilized

Description	Manufacturer	Model #	Serial #	Asset #	Cal. Due Date
EMC Analyzer	Agilent	E7405	US40240238	EB046	1/29/2026
DRG Horn Antenna	ETS Lindgren	3116	00026390	EE017	5/21/2026
Pre-Amplifier	Keystone Compliance	PA-1	0002	EG003	6/30/2026
Turntable Controller	EMCO	1061.2.013	9401-1717	EI009	UWCE

Frequency Measurements:



Frequency Verification					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	124.78	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004ED3B

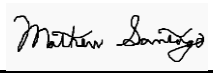
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
1150 N. Alma School Rd
Mesa, AZ 85201

Attention of: **Engineering Department**
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Test Facility	
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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	Mathew Santiago
Title	EMC Test Engineer
Signature	

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004ED3B

Date of Issue: November 11, 2025

This speed measuring device has been tested and verified to be functioning in accordance with the manufacture's specifications.

The frequency measurements performed and reported within this report demonstrate that the SmartMicro UMRR-11 T44 radar system has an accuracy of less than or equal to 1 mph up to 100 mph and 1% accuracy thereafter up to 199 mph maximum.

FSK Frequency Set 1					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	124.78	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Test Report

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004ED30

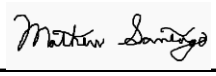
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
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Mesa, AZ 85201

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Title	EMC Test Engineer
Signature	

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N/C	##############	Initial Release	Mathew Santiago

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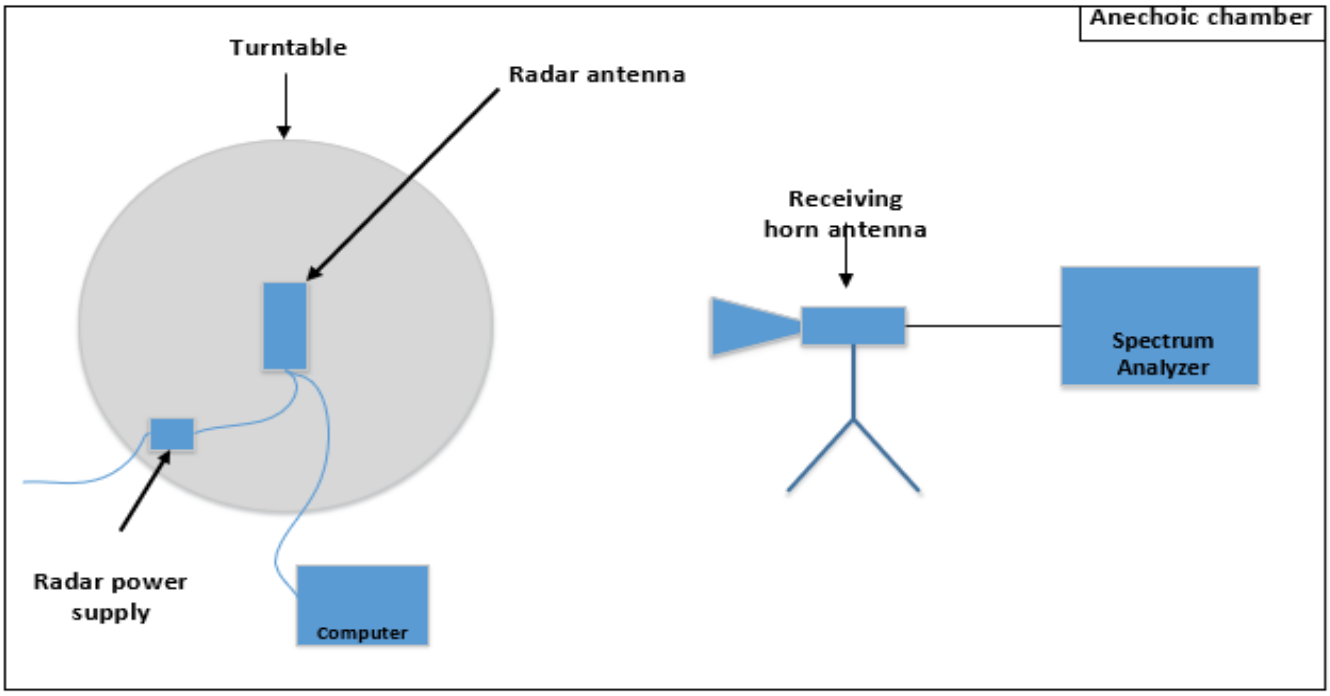
Test Setup Diagram..... 4

Test Equipment Utilized..... 4

Frequency Characteristics Test Results..... 5

Test Setup Diagram

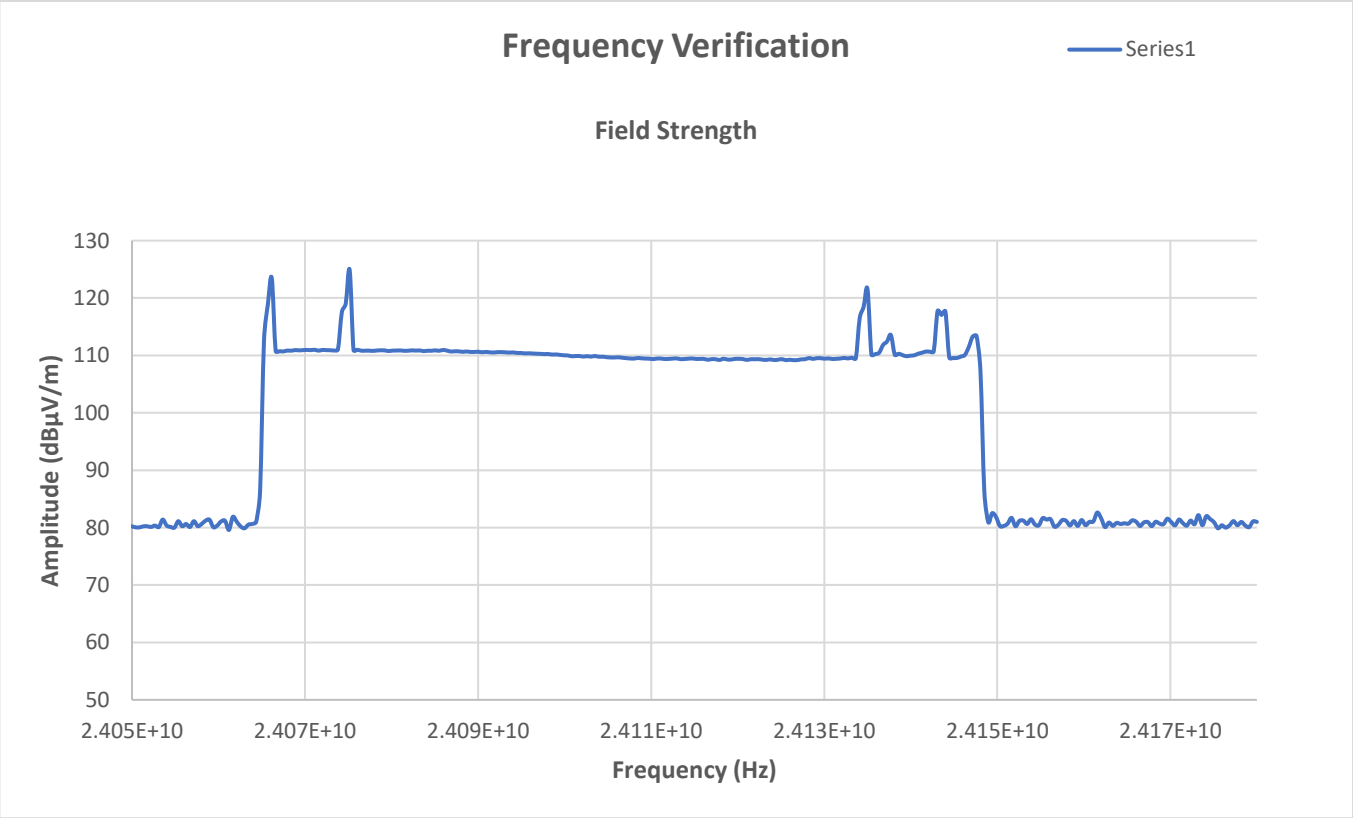




Test Equipment Utilized

Description	Manufacturer	Model #	Serial #	Asset #	Cal. Due Date
EMC Analyzer	Agilent	E7405	US40240238	EB046	1/29/2026
DRG Horn Antenna	ETS Lindgren	3116	00026390	EE017	5/21/2026
Pre-Amplifier	Keystone Compliance	PA-1	0002	EG003	6/30/2026
Turntable Controller	EMCO	1061.2.013	9401-1717	EI009	UWCE

Frequency Measurements:



Frequency Verification					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	124.90	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004ED30

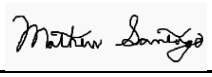
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
1150 N. Alma School Rd
Mesa, AZ 85201

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

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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	Mathew Santiago
Title	EMC Test Engineer
Signature	

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004ED30

Date of Issue: November 11, 2025

This speed measuring device has been tested and verified to be functioning in accordance with the manufacture's specifications.

The frequency measurements performed and reported within this report demonstrate that the SmartMicro UMRR-11 T44 radar system has an accuracy of less than or equal to 1 mph up to 100 mph and 1% accuracy thereafter up to 199 mph maximum.

FSK Frequency Set 1					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	124.90	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Test Report

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004EAC3

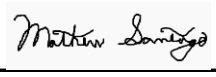
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
1150 N. Alma School Rd
Mesa, AZ 85201

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

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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	Mathew Santiago
Title	EMC Test Engineer
Signature	

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Revision	Date	Description	Revised By
N/C	##############	Initial Release	Mathew Santiago

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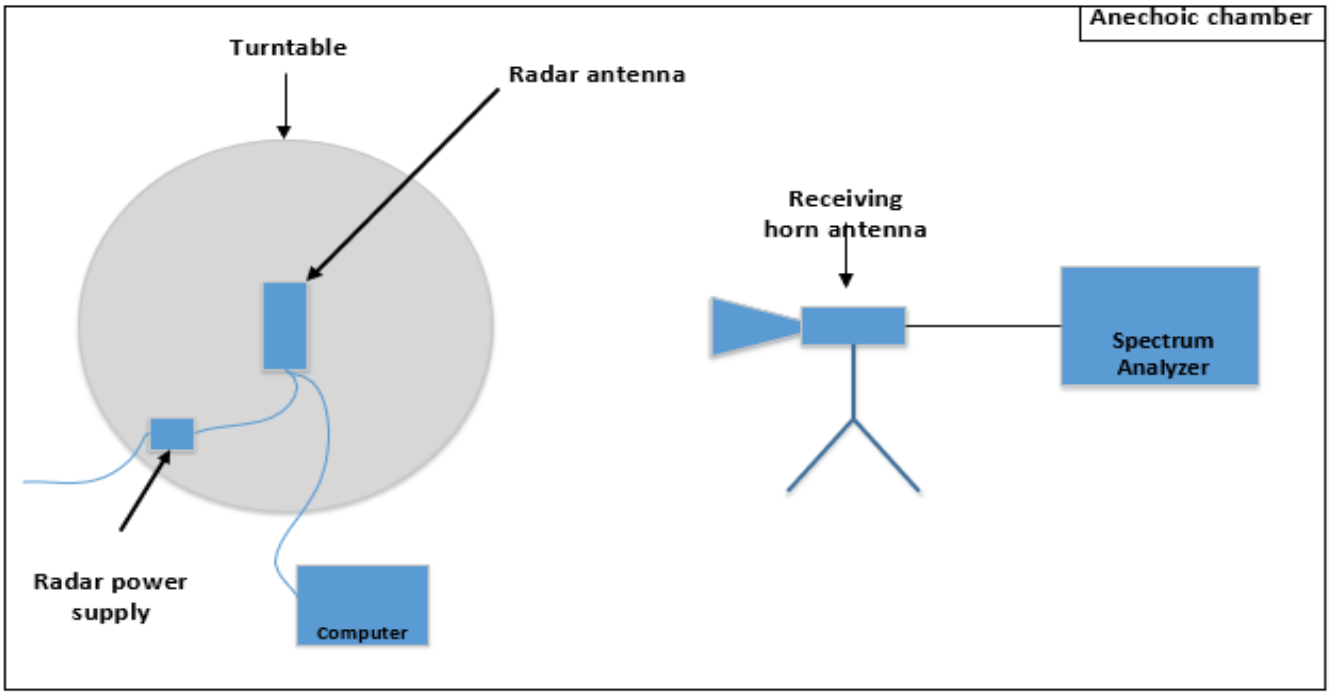
Test Setup Diagram..... 4

Test Equipment Utilized..... 4

Frequency Characteristics Test Results..... 5

Test Setup Diagram

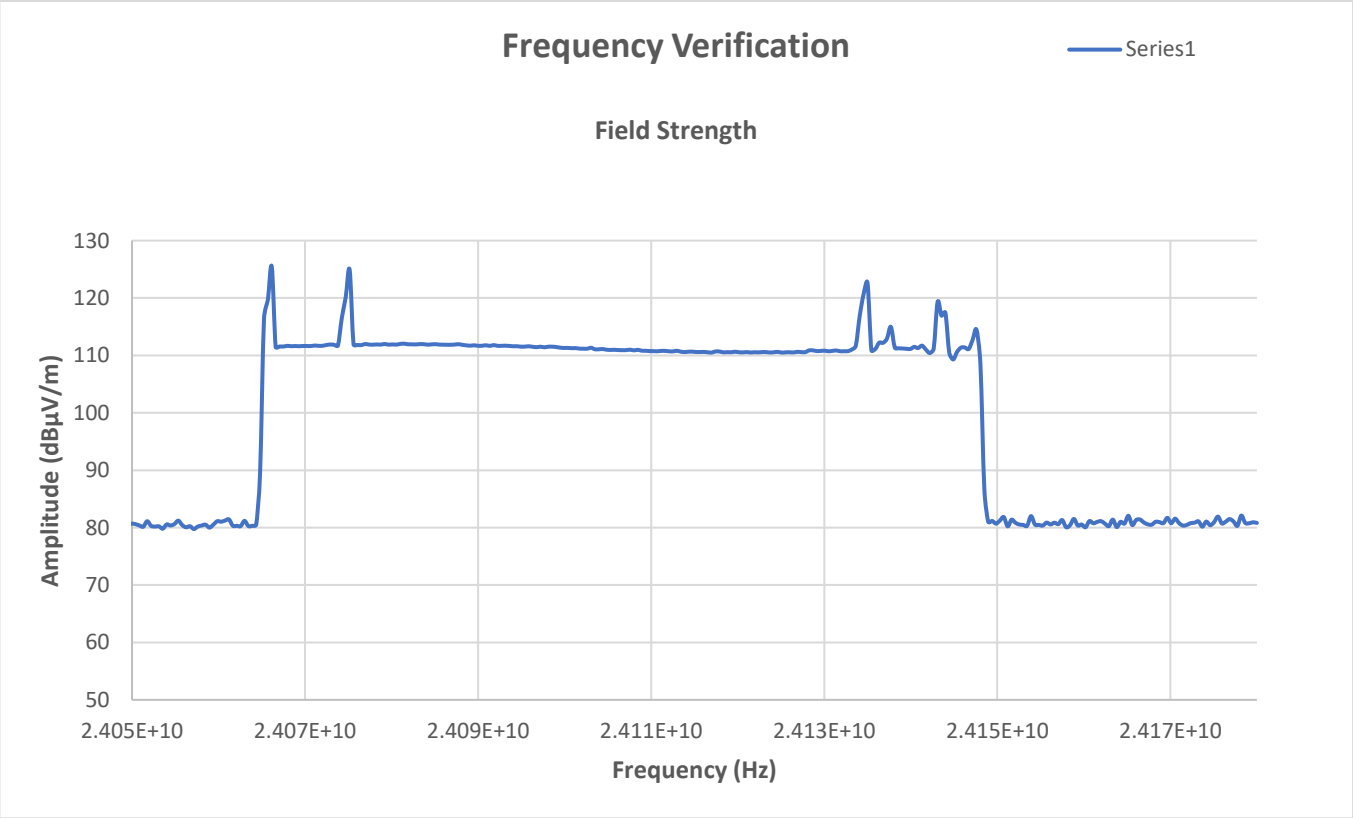




Test Equipment Utilized

Description	Manufacturer	Model #	Serial #	Asset #	Cal. Due Date
EMC Analyzer	Agilent	E7405	US40240238	EB046	1/29/2026
DRG Horn Antenna	ETS Lindgren	3116	00026390	EE017	5/21/2026
Pre-Amplifier	Keystone Compliance	PA-1	0002	EG003	6/30/2026
Turntable Controller	EMCO	1061.2.013	9401-1717	EI009	UWCE

Frequency Measurements:



Frequency Verification					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	125.46	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004EAC3

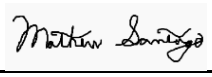
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

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	Applus+ Keystone
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	Mathew Santiago
Title	EMC Test Engineer
Signature	

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004EAC3

Date of Issue: November 11, 2025

This speed measuring device has been tested and verified to be functioning in accordance with the manufacture's specifications.

The frequency measurements performed and reported within this report demonstrate that the SmartMicro UMRR-11 T44 radar system has an accuracy of less than or equal to 1 mph up to 100 mph and 1% accuracy thereafter up to 199 mph maximum.

FSK Frequency Set 1					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	125.46	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Test Report

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004ED32

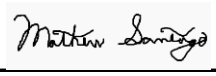
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

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Name	Mathew Santiago
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Revision	Date	Description	Revised By
N/C	##############	Initial Release	Mathew Santiago

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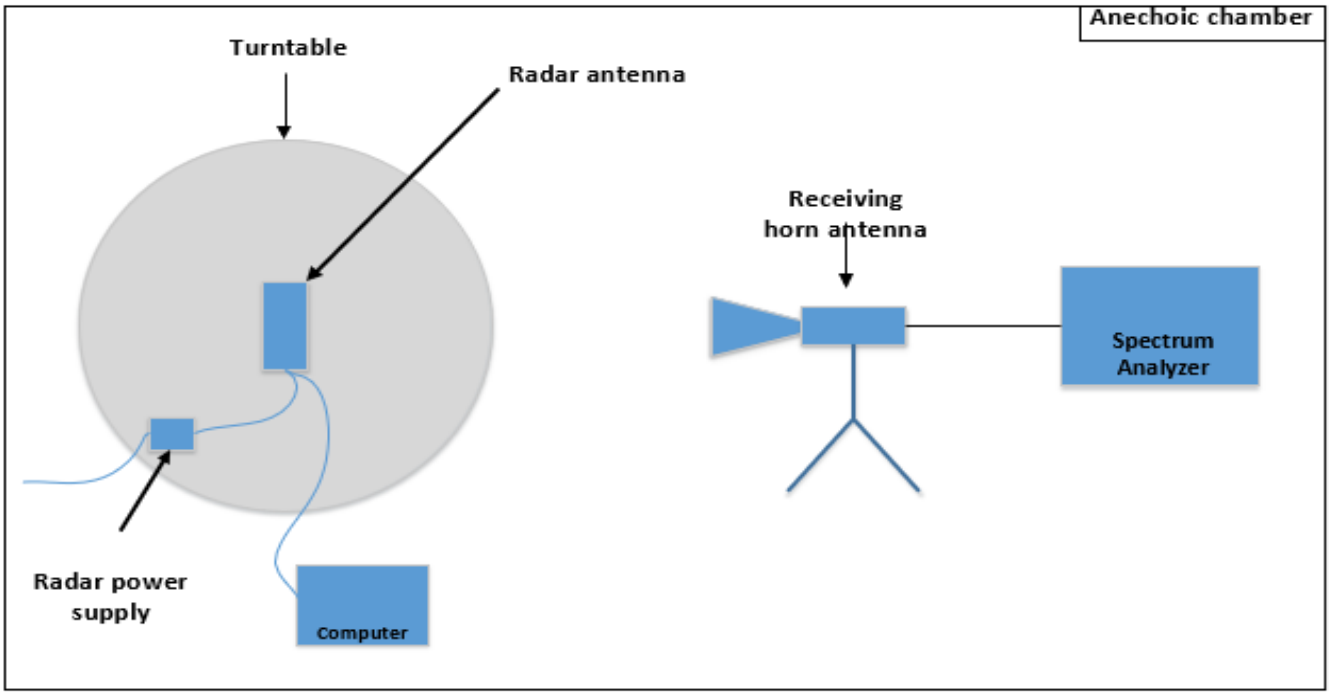
Test Setup Diagram..... 4

Test Equipment Utilized..... 4

Frequency Characteristics Test Results..... 5

Test Setup Diagram

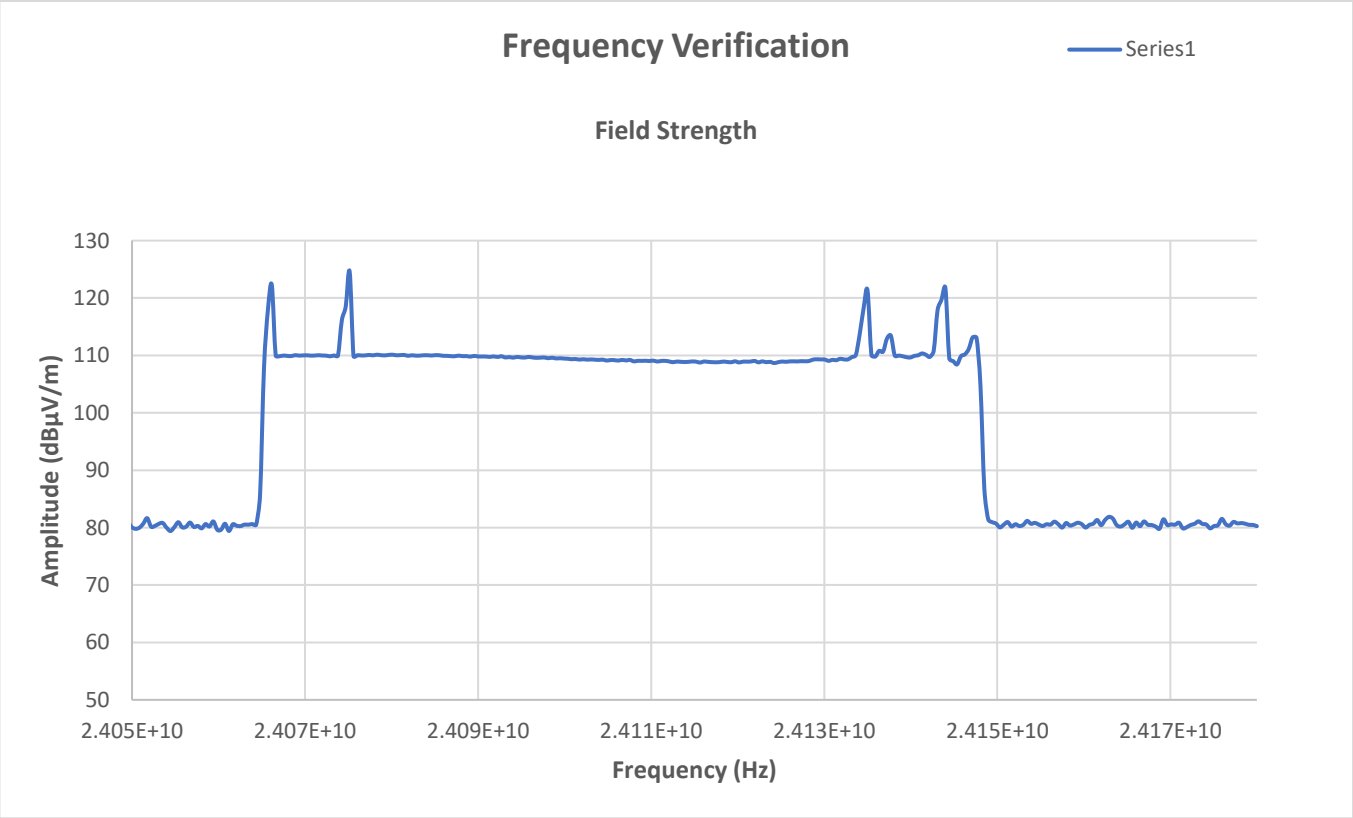




Test Equipment Utilized

Description	Manufacturer	Model #	Serial #	Asset #	Cal. Due Date
EMC Analyzer	Agilent	E7405	US40240238	EB046	1/29/2026
DRG Horn Antenna	ETS Lindgren	3116	00026390	EE017	5/21/2026
Pre-Amplifier	Keystone Compliance	PA-1	0002	EG003	6/30/2026
Turntable Controller	EMCO	1061.2.013	9401-1717	EI009	UWCE

Frequency Measurements:



Frequency Verification					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	124.62	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004ED32

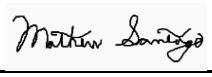
Description:
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In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
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Attention of: **Engineering Department**
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Email	questions@keystonecompliance.com
Web Site	www.keystonecompliance.com

Test Personnel	
Name	Mathew Santiago
Title	EMC Test Engineer
Signature	

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004ED32

Date of Issue: November 11, 2025

This speed measuring device has been tested and verified to be functioning in accordance with the manufacture's specifications.

The frequency measurements performed and reported within this report demonstrate that the SmartMicro UMRR-11 T44 radar system has an accuracy of less than or equal to 1 mph up to 100 mph and 1% accuracy thereafter up to 199 mph maximum.

FSK Frequency Set 1					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	124.62	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Test Report

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004EB26

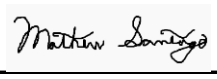
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
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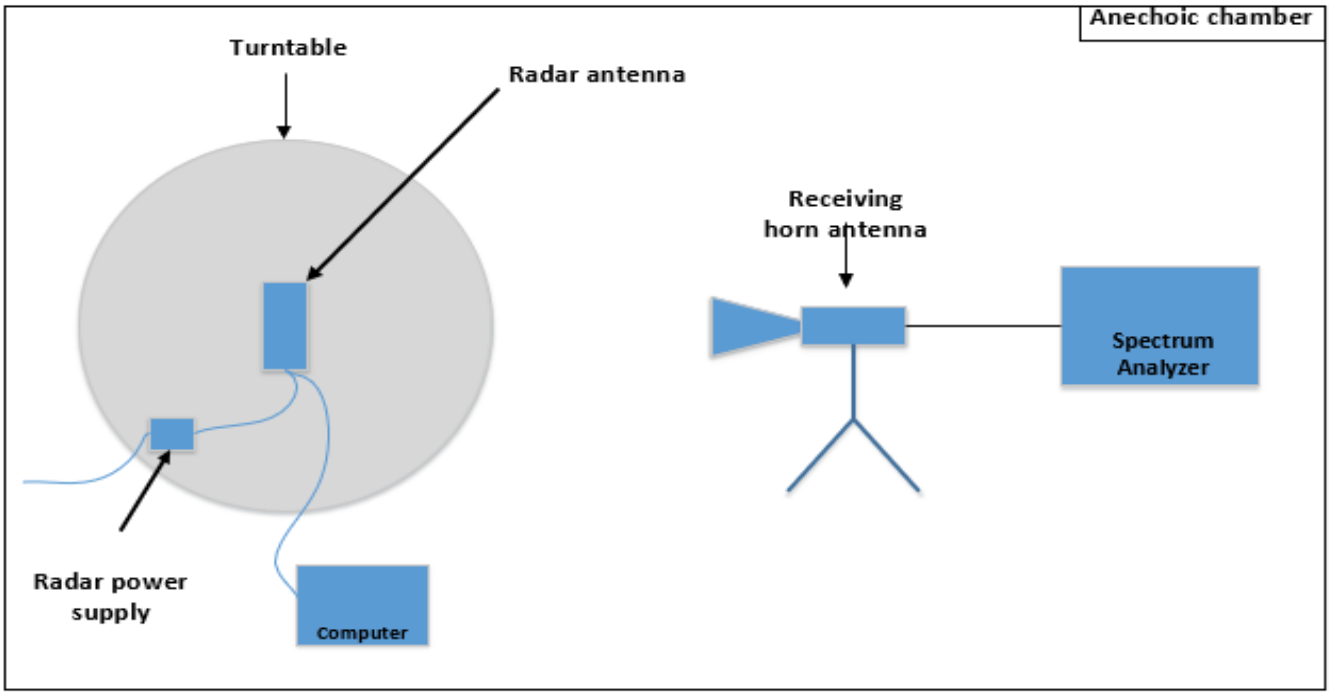
Test Setup Diagram..... 4

Test Equipment Utilized..... 4

Frequency Characteristics Test Results..... 5

Test Setup Diagram

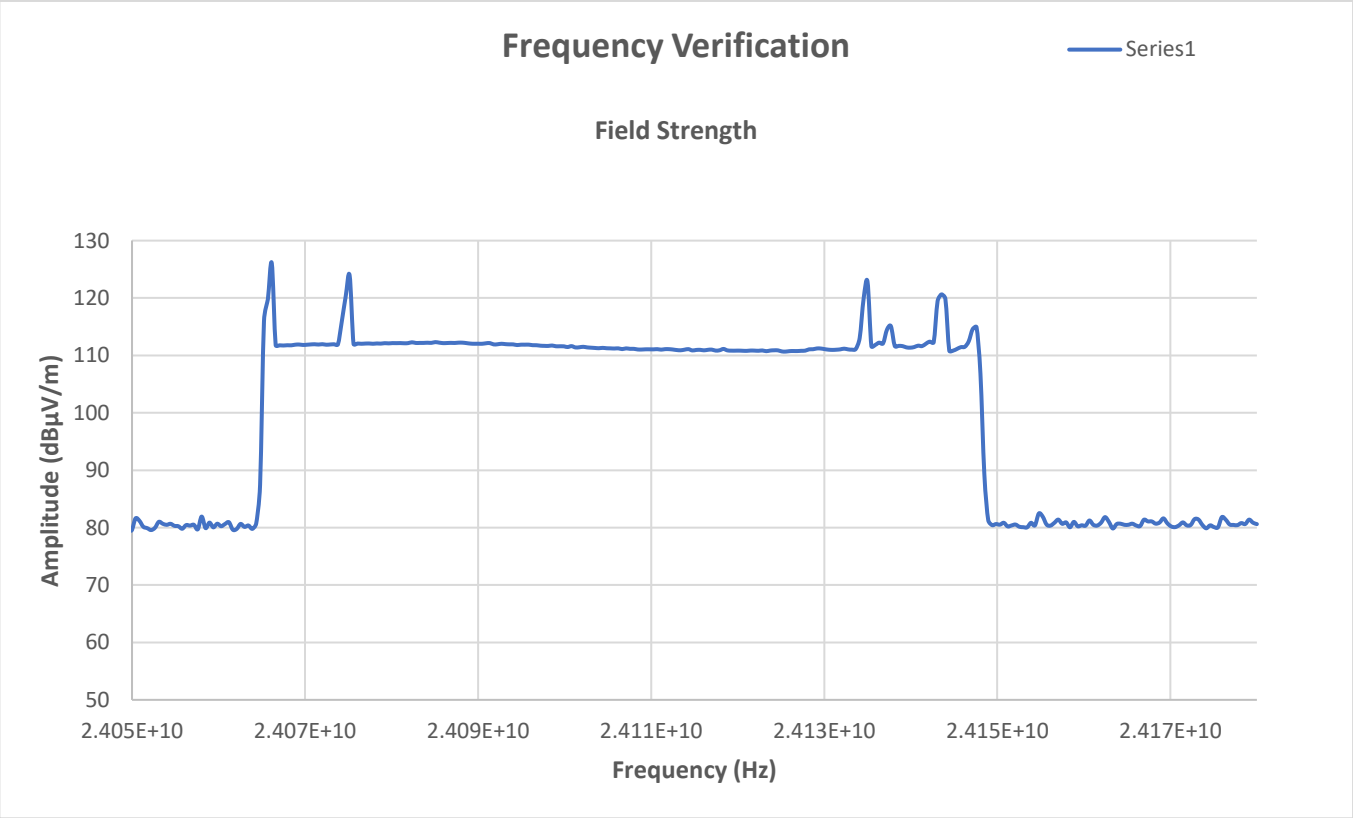




Test Equipment Utilized

Description	Manufacturer	Model #	Serial #	Asset #	Cal. Due Date
EMC Analyzer	Agilent	E7405	US40240238	EB046	1/29/2026
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Turntable Controller	EMCO	1061.2.013	9401-1717	EI009	UWCE

Frequency Measurements:



Frequency Verification					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	126.06	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004EB26

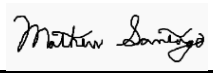
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
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City, State, Zip Code	New Castle, PA 16101
Email	questions@keystonecompliance.com
Web Site	www.keystonecompliance.com

Test Personnel	
Name	Mathew Santiago
Title	EMC Test Engineer
Signature	

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004EB26

Date of Issue: November 11, 2025

This speed measuring device has been tested and verified to be functioning in accordance with the manufacture's specifications.

The frequency measurements performed and reported within this report demonstrate that the SmartMicro UMRR-11 T44 radar system has an accuracy of less than or equal to 1 mph up to 100 mph and 1% accuracy thereafter up to 199 mph maximum.

FSK Frequency Set 1					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	126.06	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Test Report

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004EC42

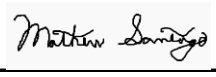
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

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	Applus + Keystone
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	Mathew Santiago
Title	EMC Test Engineer
Signature	

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Revision	Date	Description	Revised By
N/C	##############	Initial Release	Mathew Santiago

Contents

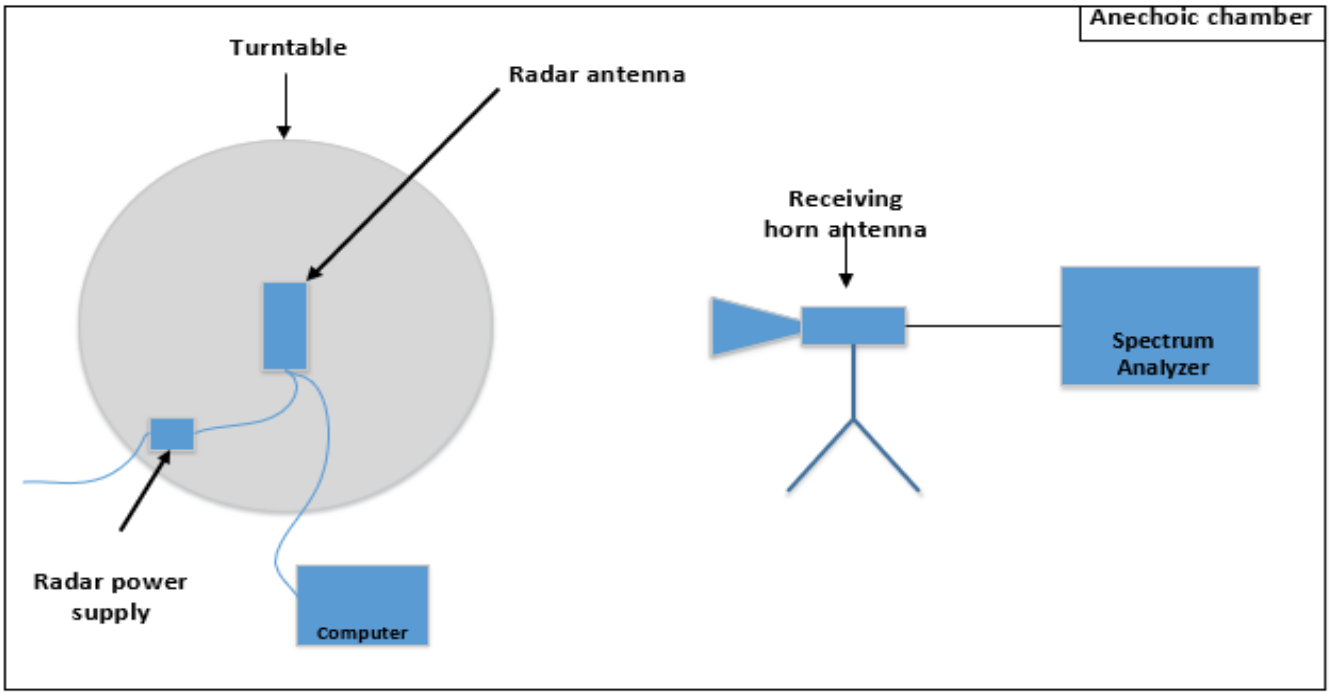
Test Setup Diagram..... 4

Test Equipment Utilized..... 4

Frequency Characteristics Test Results..... 5

Test Setup Diagram

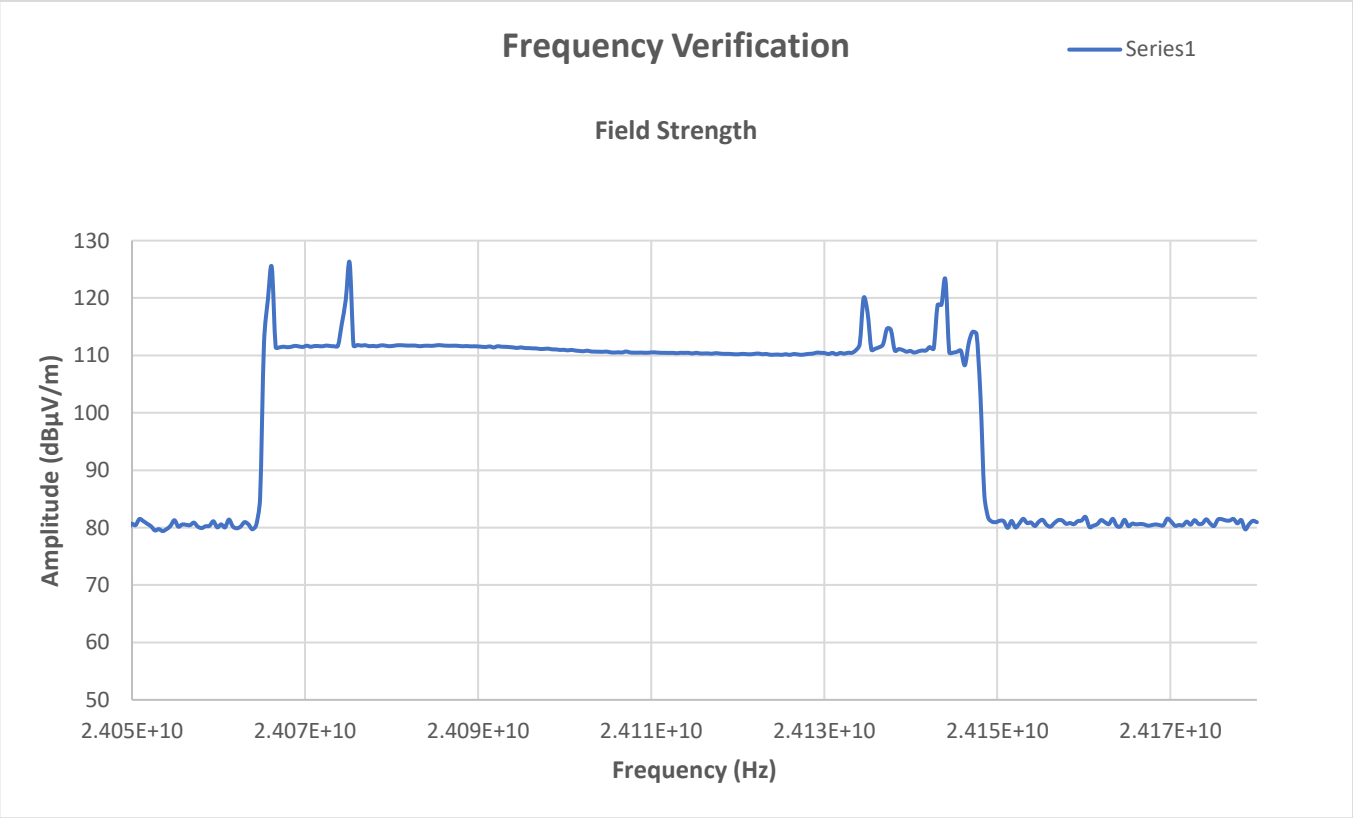




Test Equipment Utilized

Description	Manufacturer	Model #	Serial #	Asset #	Cal. Due Date
EMC Analyzer	Agilent	E7405	US40240238	EB046	1/29/2026
DRG Horn Antenna	ETS Lindgren	3116	00026390	EE017	5/21/2026
Pre-Amplifier	Keystone Compliance	PA-1	0002	EG003	6/30/2026
Turntable Controller	EMCO	1061.2.013	9401-1717	EI009	UWCE

Frequency Measurements:



Frequency Verification					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	126.17	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004EC42

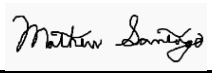
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
1150 N. Alma School Rd
Mesa, AZ 85201

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

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Address	131 North Columbus Innerbelt
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Email	questions@keystonecompliance.com
Web Site	www.keystonecompliance.com

Test Personnel	
Name	Mathew Santiago
Title	EMC Test Engineer
Signature	

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004EC42

Date of Issue: November 11, 2025

This speed measuring device has been tested and verified to be functioning in accordance with the manufacture's specifications.

The frequency measurements performed and reported within this report demonstrate that the SmartMicro UMRR-11 T44 radar system has an accuracy of less than or equal to 1 mph up to 100 mph and 1% accuracy thereafter up to 199 mph maximum.

FSK Frequency Set 1					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	126.17	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Test Report

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004ED39

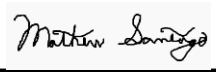
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
1150 N. Alma School Rd
Mesa, AZ 85201

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

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Test Personnel	
Name	Mathew Santiago
Title	EMC Test Engineer
Signature	

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Revision	Date	Description	Revised By
N/C	##############	Initial Release	Mathew Santiago

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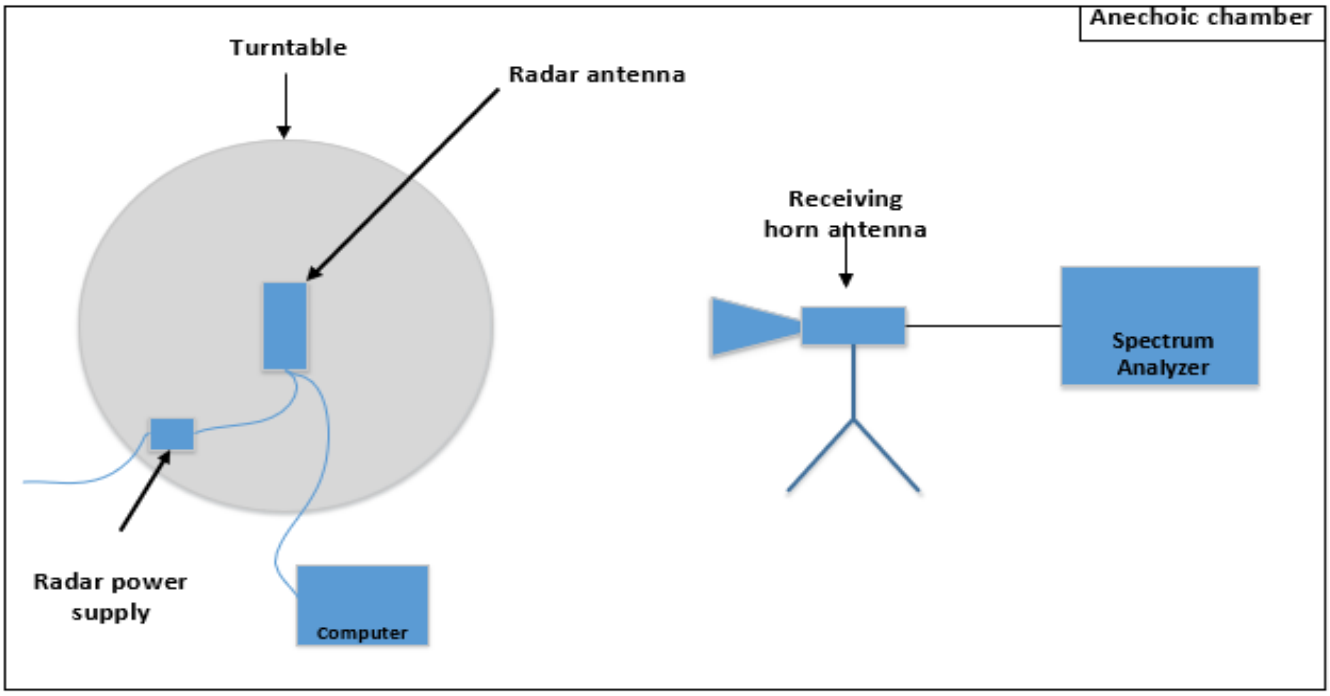
Test Setup Diagram..... 4

Test Equipment Utilized..... 4

Frequency Characteristics Test Results..... 5

Test Setup Diagram

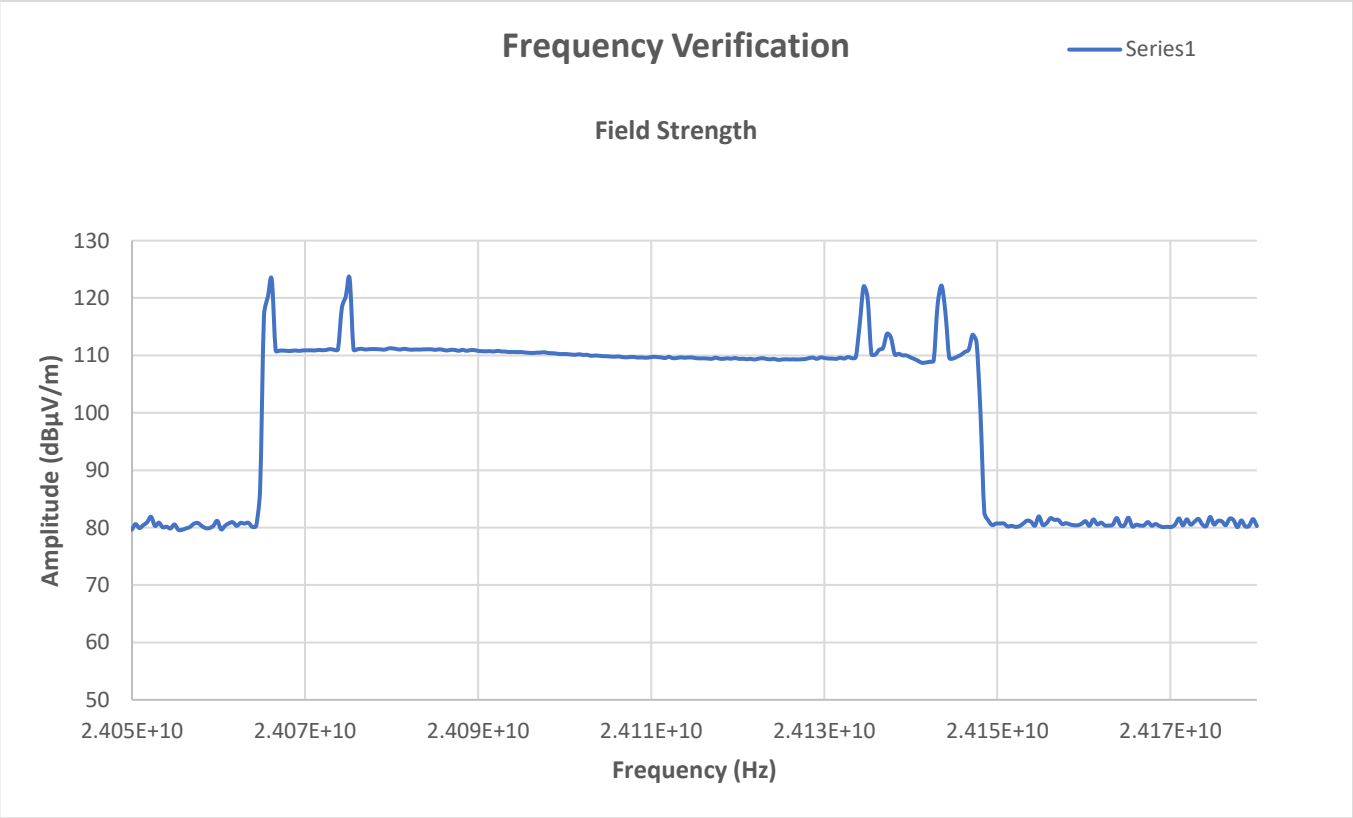




Test Equipment Utilized

Description	Manufacturer	Model #	Serial #	Asset #	Cal. Due Date
EMC Analyzer	Agilent	E7405	US40240238	EB046	1/29/2026
DRG Horn Antenna	ETS Lindgren	3116	00026390	EE017	5/21/2026
Pre-Amplifier	Keystone Compliance	PA-1	0002	EG003	6/30/2026
Turntable Controller	EMCO	1061.2.013	9401-1717	EI009	UWCE

Frequency Measurements:



Frequency Verification					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	123.40	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004ED39

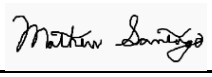
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
1150 N. Alma School Rd
Mesa, AZ 85201

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

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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	Mathew Santiago
Title	EMC Test Engineer
Signature	

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004ED39

Date of Issue: November 11, 2025

This speed measuring device has been tested and verified to be functioning in accordance with the manufacture's specifications.

The frequency measurements performed and reported within this report demonstrate that the SmartMicro UMRR-11 T44 radar system has an accuracy of less than or equal to 1 mph up to 100 mph and 1% accuracy thereafter up to 199 mph maximum.

FSK Frequency Set 1					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	123.40	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Test Report

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004ED2F

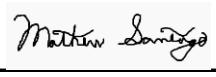
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
1150 N. Alma School Rd
Mesa, AZ 85201

Attention of: **Engineering Department**
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Test Personnel	
Name	Mathew Santiago
Title	EMC Test Engineer
Signature	

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Revision	Date	Description	Revised By
N/C	##############	Initial Release	Mathew Santiago

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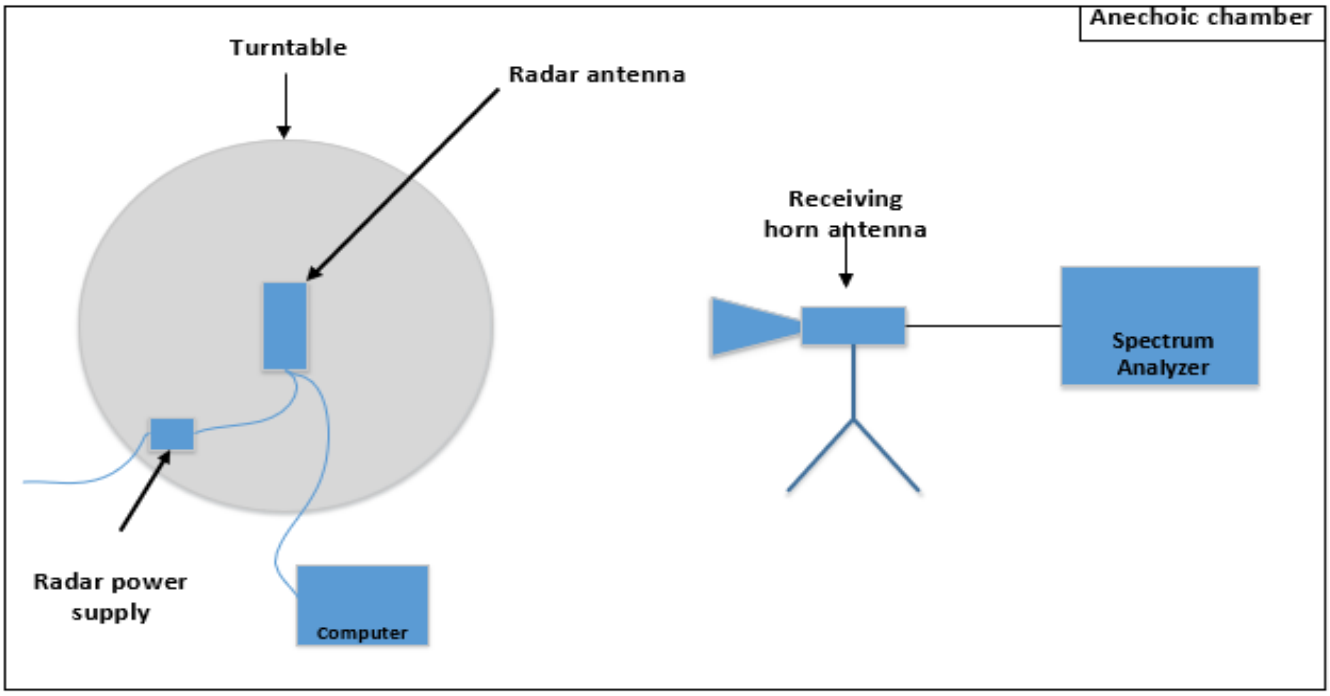
Test Setup Diagram..... 4

Test Equipment Utilized..... 4

Frequency Characteristics Test Results..... 5

Test Setup Diagram

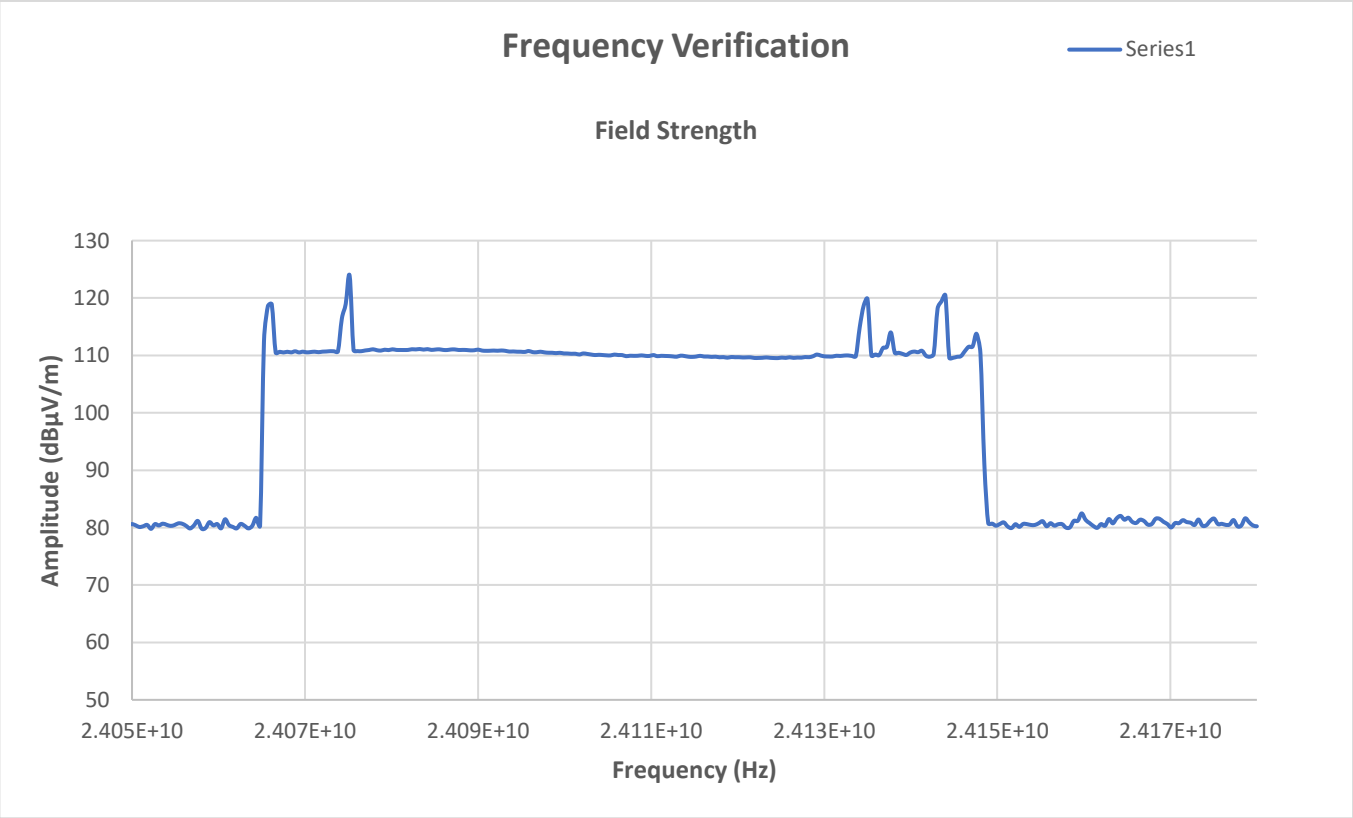




Test Equipment Utilized

Description	Manufacturer	Model #	Serial #	Asset #	Cal. Due Date
EMC Analyzer	Agilent	E7405	US40240238	EB046	1/29/2026
DRG Horn Antenna	ETS Lindgren	3116	00026390	EE017	5/21/2026
Pre-Amplifier	Keystone Compliance	PA-1	0002	EG003	6/30/2026
Turntable Controller	EMCO	1061.2.013	9401-1717	EI009	UWCE

Frequency Measurements:



Frequency Verification					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	123.88	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004ED2F

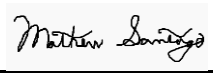
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

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	Applus+ Keystone
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	Mathew Santiago
Title	EMC Test Engineer
Signature	

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004ED2F

Date of Issue: November 11, 2025

This speed measuring device has been tested and verified to be functioning in accordance with the manufacture's specifications.

The frequency measurements performed and reported within this report demonstrate that the SmartMicro UMRR-11 T44 radar system has an accuracy of less than or equal to 1 mph up to 100 mph and 1% accuracy thereafter up to 199 mph maximum.

FSK Frequency Set 1					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	123.88	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Test Report

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004ED34

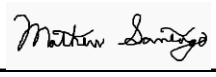
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

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	Applus + Keystone
Address	131 North Columbus Innerbelt
City, State, Zip Code	New Castle, PA 16101
Email	questions@keystonecompliance.com
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Test Personnel	
Name	Mathew Santiago
Title	EMC Test Engineer
Signature	

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Revision	Date	Description	Revised By
N/C	##############	Initial Release	Mathew Santiago

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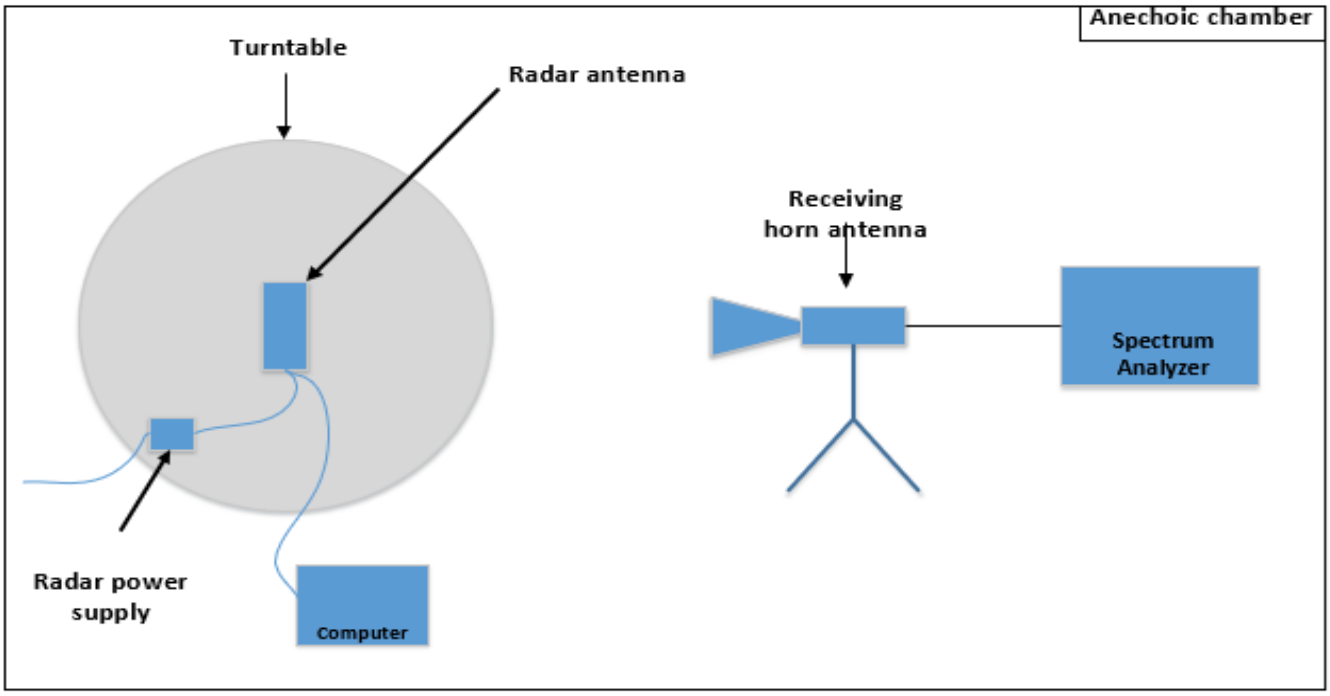
Test Setup Diagram..... 4

Test Equipment Utilized..... 4

Frequency Characteristics Test Results..... 5

Test Setup Diagram

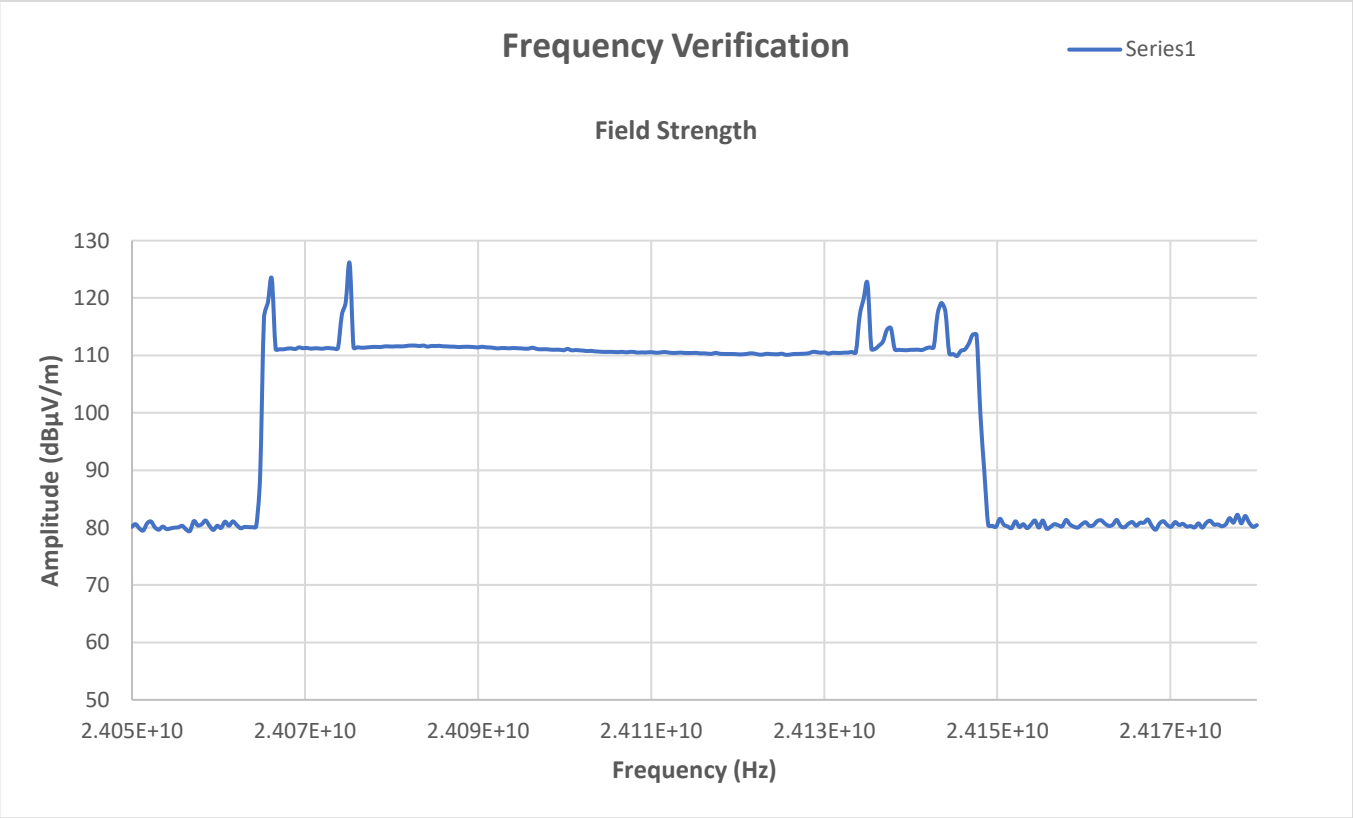




Test Equipment Utilized

Description	Manufacturer	Model #	Serial #	Asset #	Cal. Due Date
EMC Analyzer	Agilent	E7405	US40240238	EB046	1/29/2026
DRG Horn Antenna	ETS Lindgren	3116	00026390	EE017	5/21/2026
Pre-Amplifier	Keystone Compliance	PA-1	0002	EG003	6/30/2026
Turntable Controller	EMCO	1061.2.013	9401-1717	EI009	UWCE

Frequency Measurements:



Frequency Verification					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.106	82.4	126.04	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004ED34

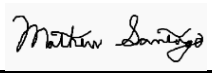
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
1150 N. Alma School Rd
Mesa, AZ 85201

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

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Address	131 North Columbus Innerbelt
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Email	questions@keystonecompliance.com
Web Site	www.keystonecompliance.com

Test Personnel	
Name	Mathew Santiago
Title	EMC Test Engineer
Signature	

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004ED34

Date of Issue: November 11, 2025

This speed measuring device has been tested and verified to be functioning in accordance with the manufacture's specifications.

The frequency measurements performed and reported within this report demonstrate that the SmartMicro UMRR-11 T44 radar system has an accuracy of less than or equal to 1 mph up to 100 mph and 1% accuracy thereafter up to 199 mph maximum.

FSK Frequency Set 1					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.106	82.4	126.04	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Test Report

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004ED2E

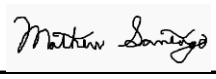
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

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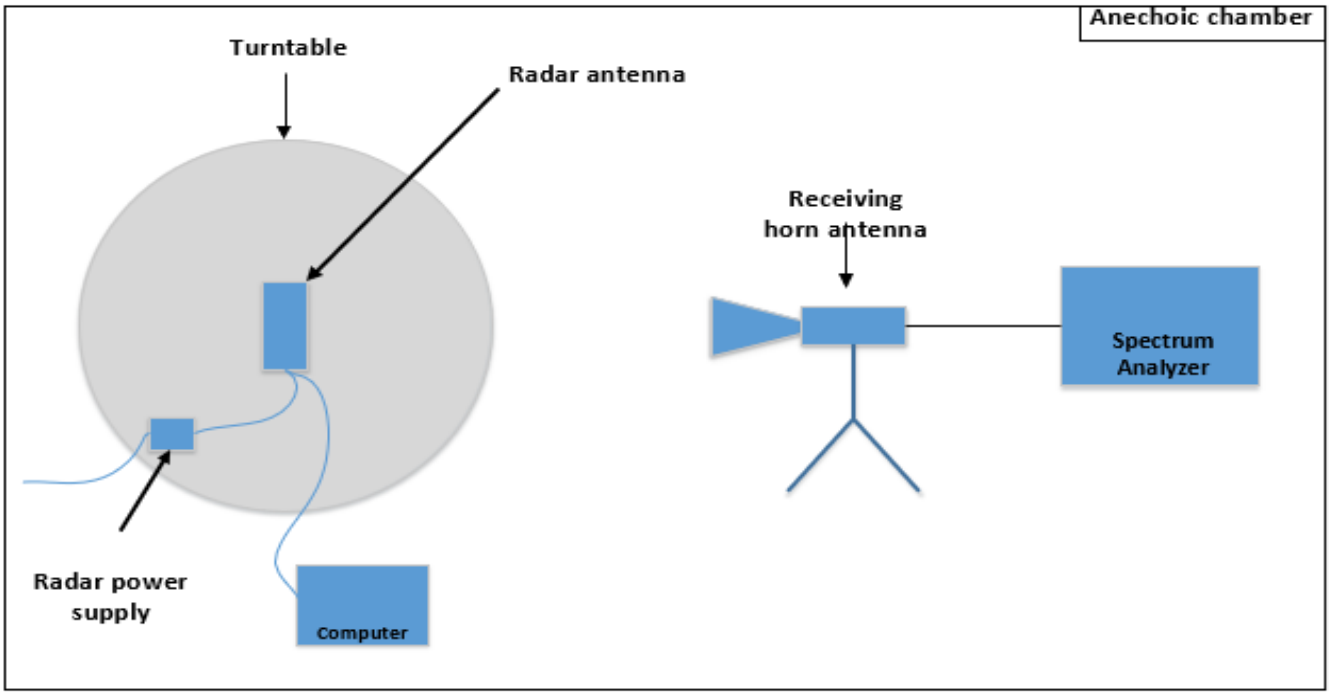
Test Setup Diagram..... 4

Test Equipment Utilized..... 4

Frequency Characteristics Test Results..... 5

Test Setup Diagram

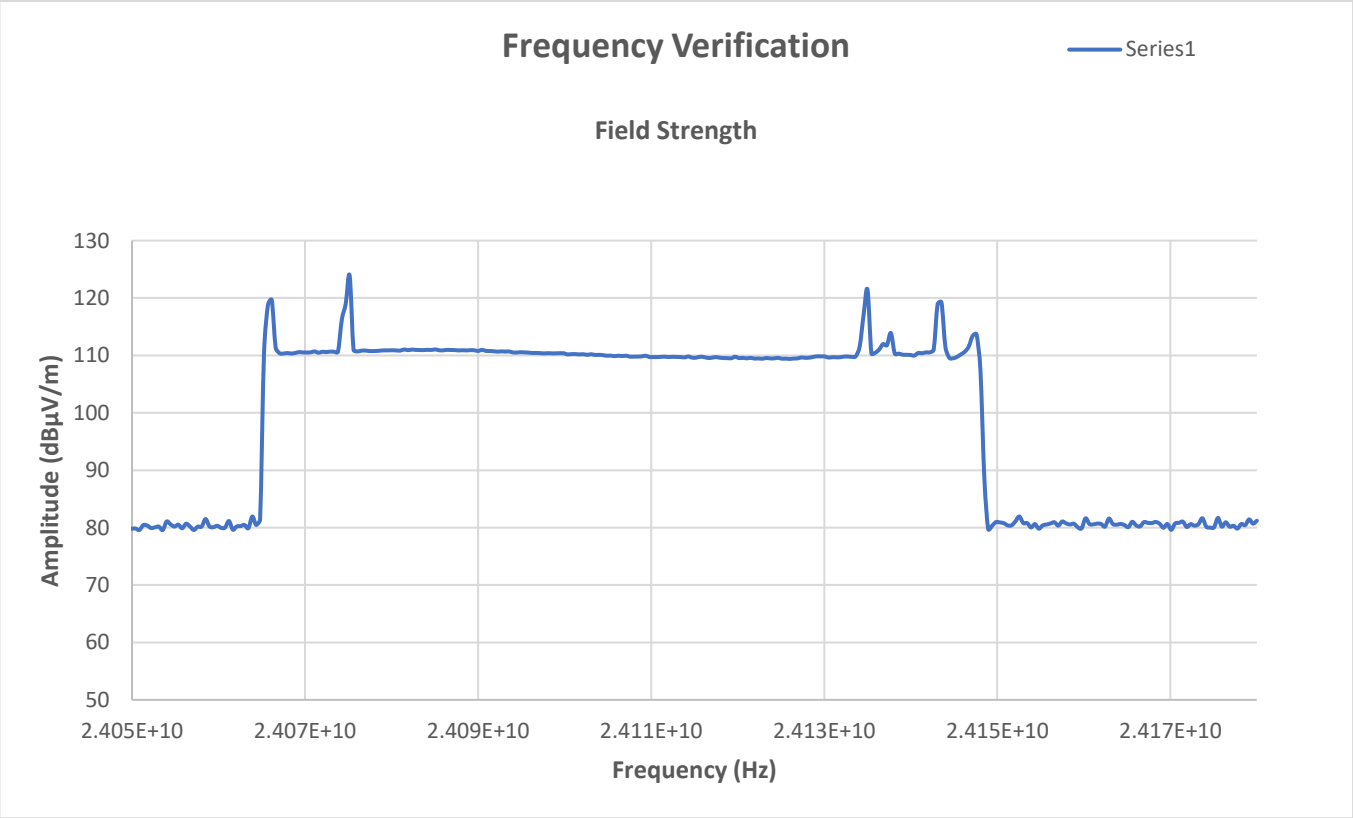




Test Equipment Utilized

Description	Manufacturer	Model #	Serial #	Asset #	Cal. Due Date
EMC Analyzer	Agilent	E7405	US40240238	EB046	1/29/2026
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Turntable Controller	EMCO	1061.2.013	9401-1717	EI009	UWCE

Frequency Measurements:



Frequency Verification					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	123.91	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004ED2E

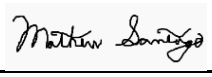
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
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Phone: (480) 443-7000

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Web Site	www.keystonecompliance.com

Test Personnel	
Name	Mathew Santiago
Title	EMC Test Engineer
Signature	

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004ED2E

Date of Issue: November 11, 2025

This speed measuring device has been tested and verified to be functioning in accordance with the manufacture's specifications.

The frequency measurements performed and reported within this report demonstrate that the SmartMicro UMRR-11 T44 radar system has an accuracy of less than or equal to 1 mph up to 100 mph and 1% accuracy thereafter up to 199 mph maximum.

FSK Frequency Set 1					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	123.91	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Test Report

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004ED35

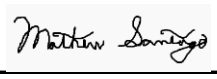
Description:
Radar Characteristics Validation
In compliance with:
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Date of Issue: November 11, 2025

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	Applus + Keystone
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	Mathew Santiago
Title	EMC Test Engineer
Signature	

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Revision	Date	Description	Revised By
N/C	##############	Initial Release	Mathew Santiago

Contents

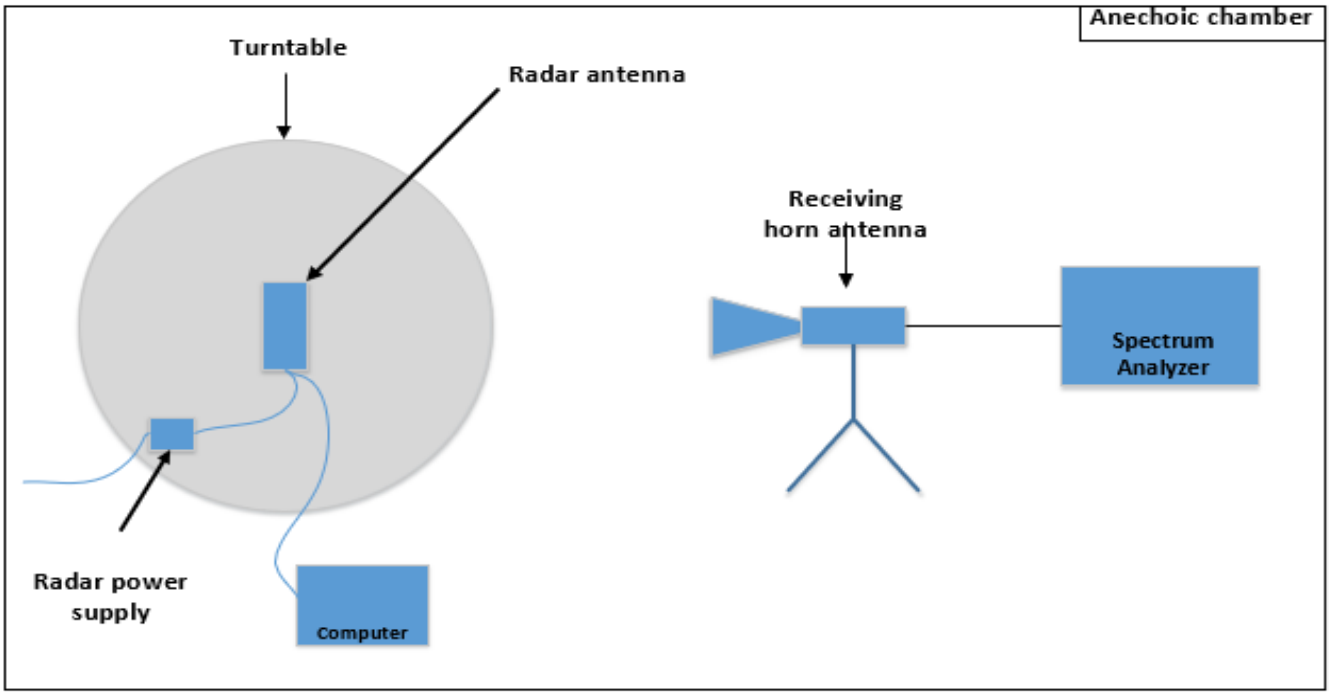
Test Setup Diagram..... 4

Test Equipment Utilized..... 4

Frequency Characteristics Test Results..... 5

Test Setup Diagram

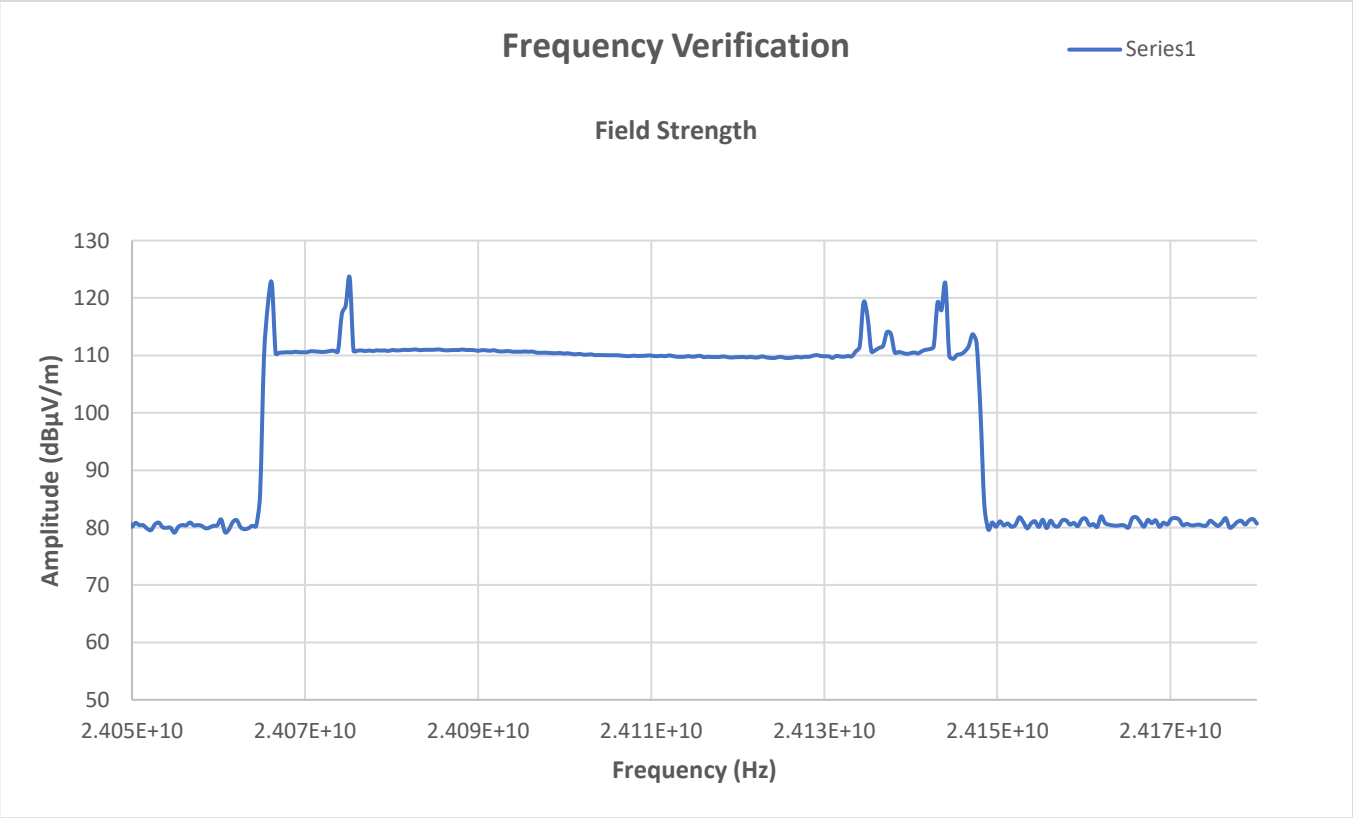




Test Equipment Utilized

Description	Manufacturer	Model #	Serial #	Asset #	Cal. Due Date
EMC Analyzer	Agilent	E7405	US40240238	EB046	1/29/2026
DRG Horn Antenna	ETS Lindgren	3116	00026390	EE017	5/21/2026
Pre-Amplifier	Keystone Compliance	PA-1	0002	EG003	6/30/2026
Turntable Controller	EMCO	1061.2.013	9401-1717	EI009	UWCE

Frequency Measurements:



Frequency Verification					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	123.57	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004ED35

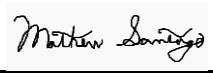
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

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Web Site	www.keystonecompliance.com

Test Personnel	
Name	Mathew Santiago
Title	EMC Test Engineer
Signature	

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004ED35

Date of Issue: November 11, 2025

This speed measuring device has been tested and verified to be functioning in accordance with the manufacture's specifications.

The frequency measurements performed and reported within this report demonstrate that the SmartMicro UMRR-11 T44 radar system has an accuracy of less than or equal to 1 mph up to 100 mph and 1% accuracy thereafter up to 199 mph maximum.

FSK Frequency Set 1					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	123.57	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Test Report

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004EC45

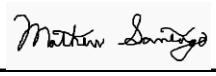
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

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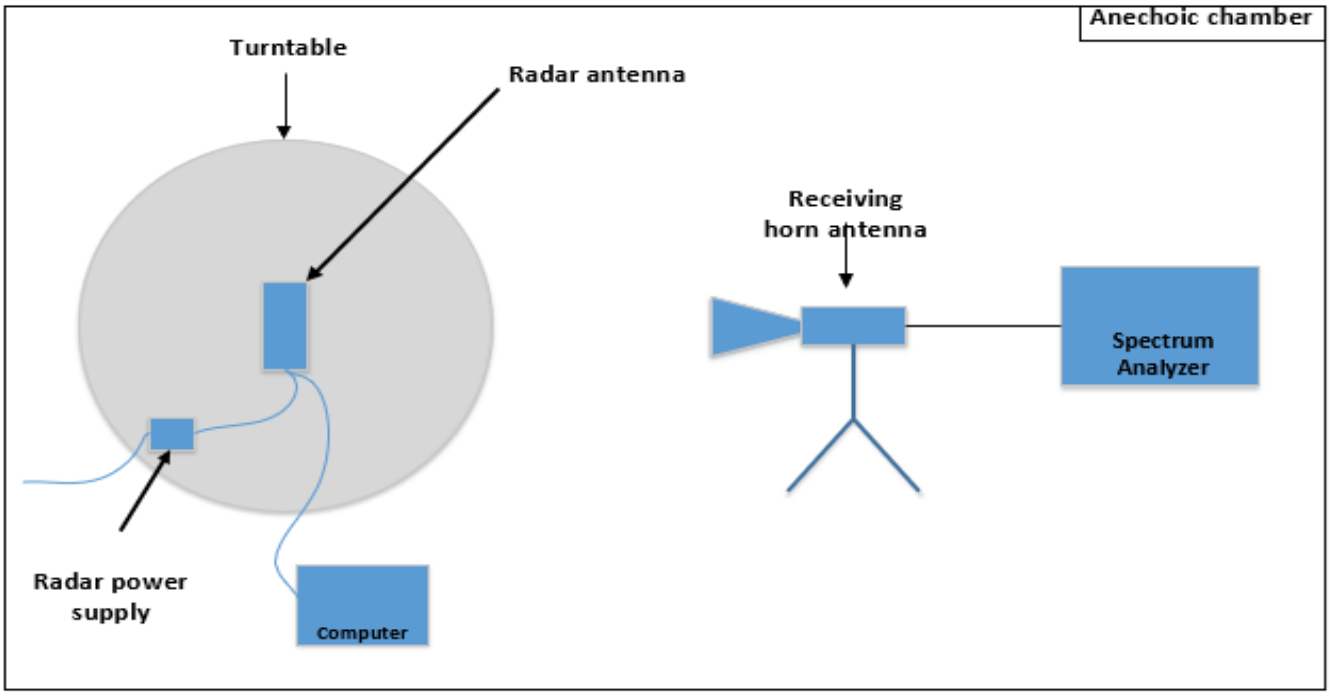
Test Setup Diagram..... 4

Test Equipment Utilized..... 4

Frequency Characteristics Test Results..... 5

Test Setup Diagram

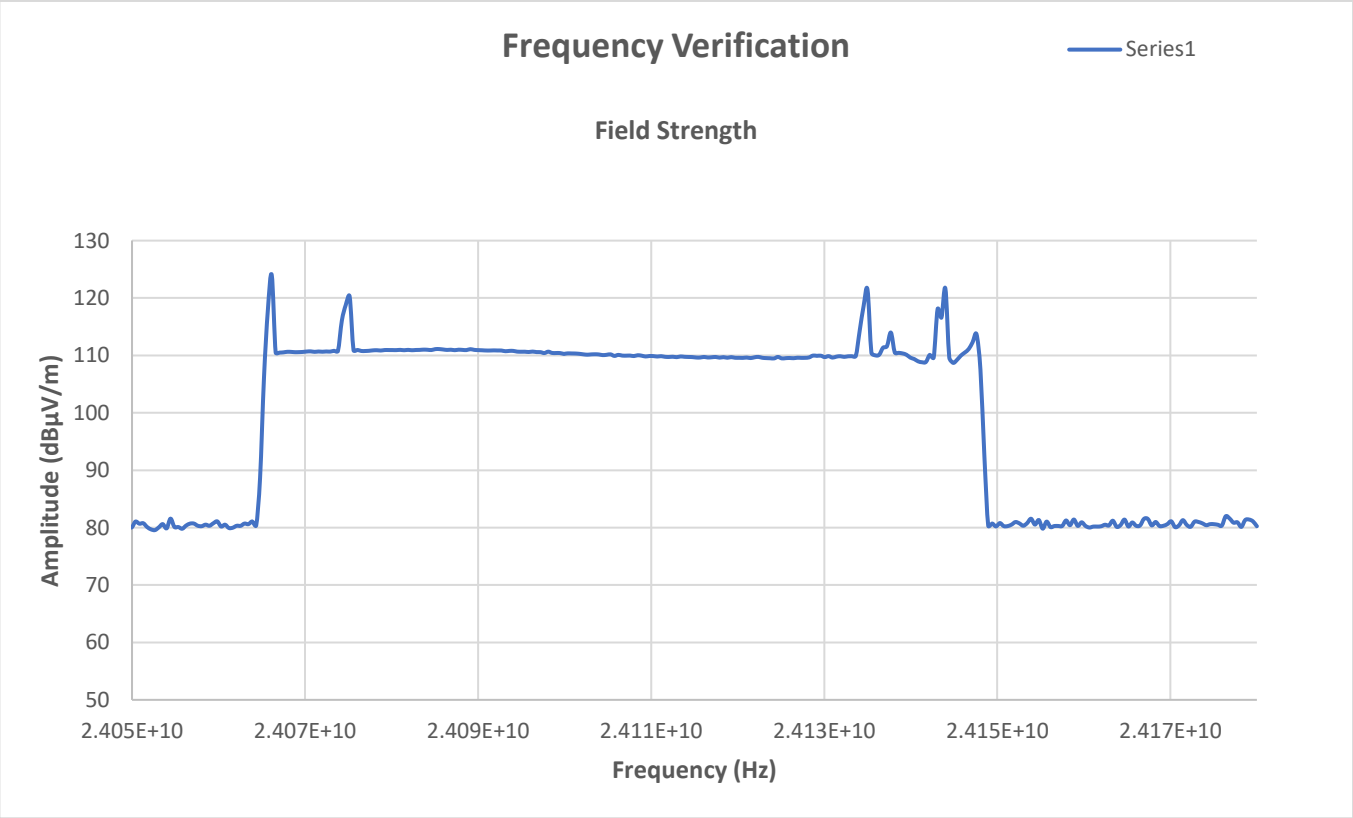




Test Equipment Utilized

Description	Manufacturer	Model #	Serial #	Asset #	Cal. Due Date
EMC Analyzer	Agilent	E7405	US40240238	EB046	1/29/2026
DRG Horn Antenna	ETS Lindgren	3116	00026390	EE017	5/21/2026
Pre-Amplifier	Keystone Compliance	PA-1	0002	EG003	6/30/2026
Turntable Controller	EMCO	1061.2.013	9401-1717	EI009	UWCE

Frequency Measurements:



Frequency Verification					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	123.98	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004EC45

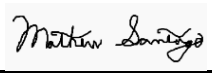
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Radar Characteristics Validation
In compliance with:
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Date of Issue: November 11, 2025

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Web Site	www.keystonecompliance.com

Test Personnel	
Name	Mathew Santiago
Title	EMC Test Engineer
Signature	

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004EC45

Date of Issue: November 11, 2025

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FSK Frequency Set 1					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	123.98	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Test Report

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004EDC7

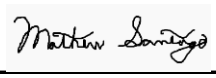
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

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Name	Mathew Santiago
Title	EMC Test Engineer
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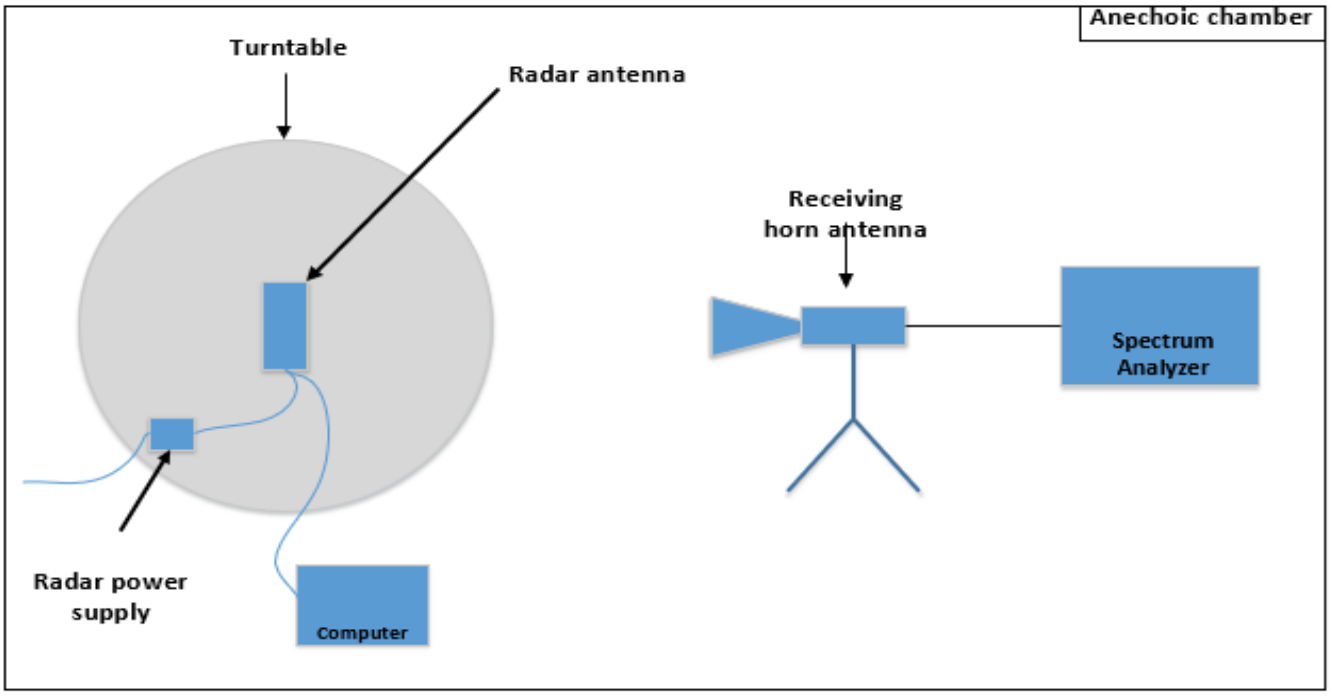
Test Setup Diagram..... 4

Test Equipment Utilized..... 4

Frequency Characteristics Test Results..... 5

Test Setup Diagram

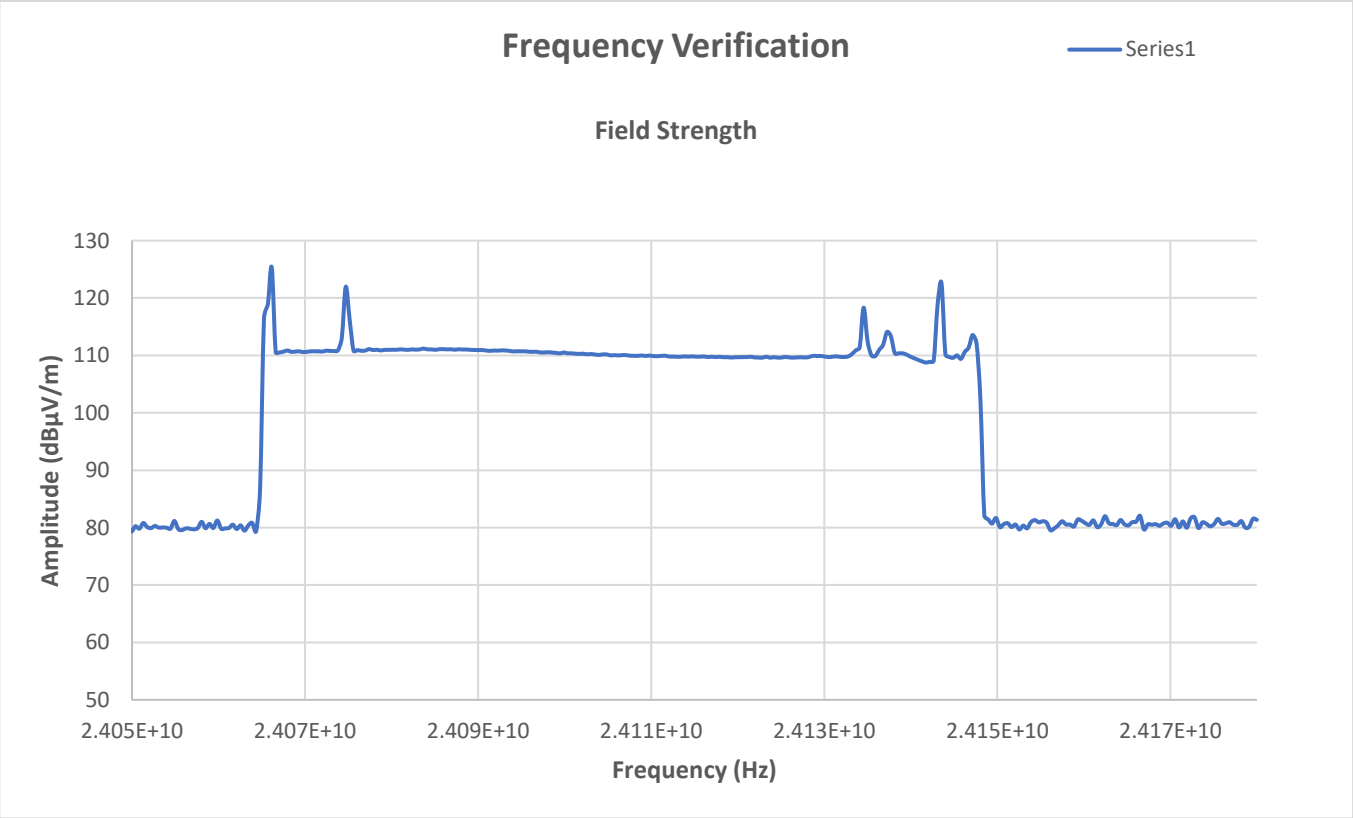




Test Equipment Utilized

Description	Manufacturer	Model #	Serial #	Asset #	Cal. Due Date
EMC Analyzer	Agilent	E7405	US40240238	EB046	1/29/2026
DRG Horn Antenna	ETS Lindgren	3116	00026390	EE017	5/21/2026
Pre-Amplifier	Keystone Compliance	PA-1	0002	EG003	6/30/2026
Turntable Controller	EMCO	1061.2.013	9401-1717	EI009	UWCE

Frequency Measurements:



Frequency Verification					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	125.29	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004EDC7

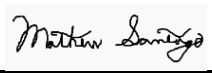
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
1150 N. Alma School Rd
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Email	questions@keystonecompliance.com
Web Site	www.keystonecompliance.com

Test Personnel	
Name	Mathew Santiago
Title	EMC Test Engineer
Signature	

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004EDC7

Date of Issue: November 11, 2025

This speed measuring device has been tested and verified to be functioning in accordance with the manufacture's specifications.

The frequency measurements performed and reported within this report demonstrate that the SmartMicro UMRR-11 T44 radar system has an accuracy of less than or equal to 1 mph up to 100 mph and 1% accuracy thereafter up to 199 mph maximum.

FSK Frequency Set 1					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	125.29	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Test Report

Model: UMRR-11 T44

Part Number / Serial Number:
0x00049020

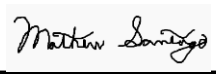
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
1150 N. Alma School Rd
Mesa, AZ 85201

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Address	131 North Columbus Innerbelt
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Test Personnel	
Name	Mathew Santiago
Title	EMC Test Engineer
Signature	

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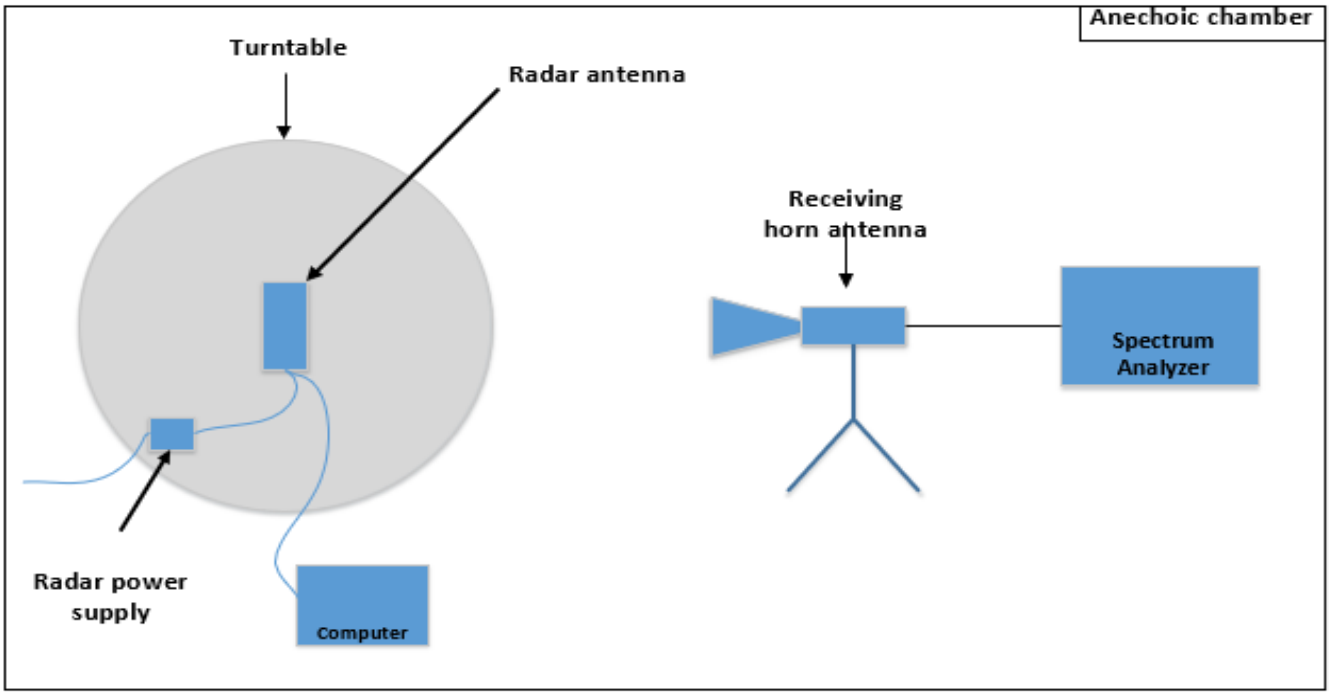
Test Setup Diagram..... 4

Test Equipment Utilized..... 4

Frequency Characteristics Test Results..... 5

Test Setup Diagram

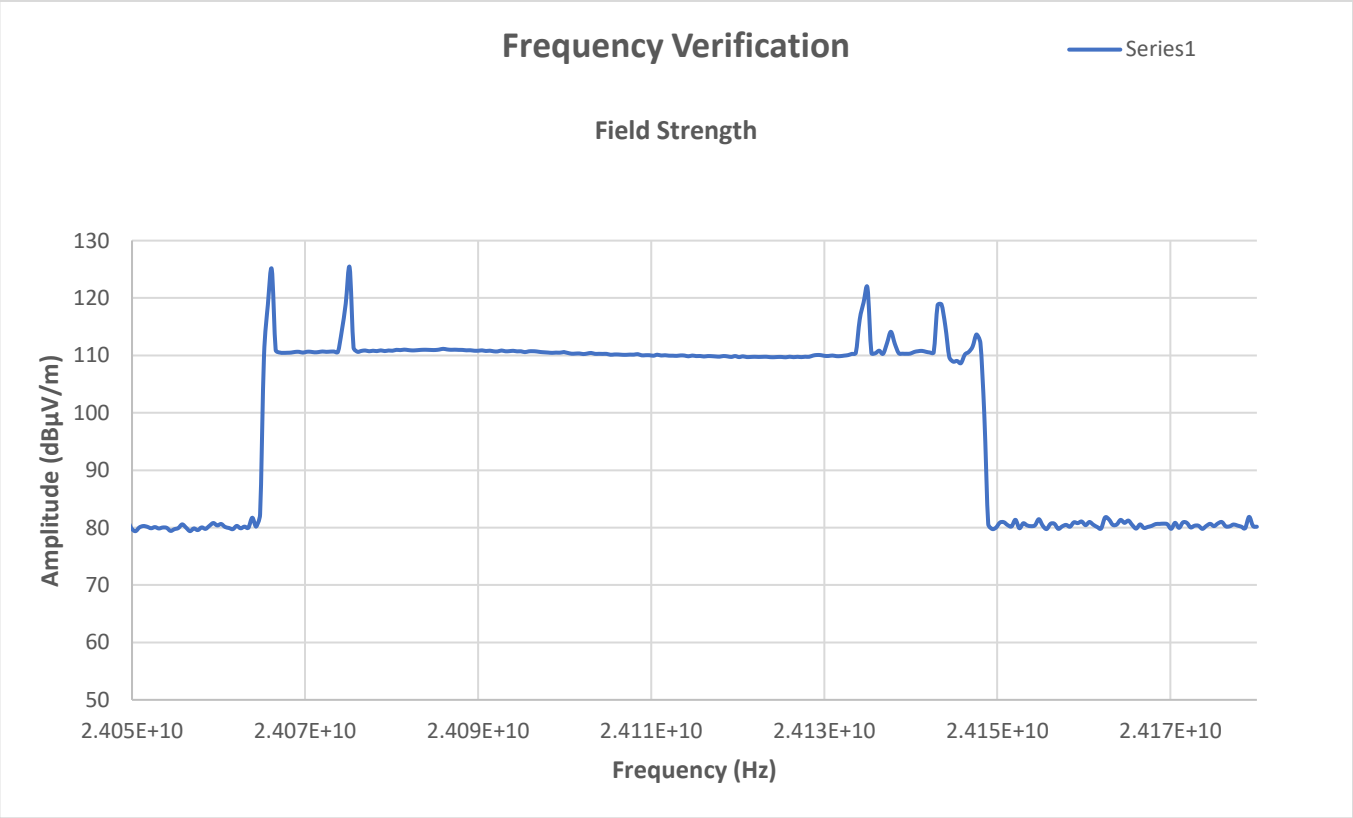




Test Equipment Utilized

Description	Manufacturer	Model #	Serial #	Asset #	Cal. Due Date
EMC Analyzer	Agilent	E7405	US40240238	EB046	1/29/2026
DRG Horn Antenna	ETS Lindgren	3116	00026390	EE017	5/21/2026
Pre-Amplifier	Keystone Compliance	PA-1	0002	EG003	6/30/2026
Turntable Controller	EMCO	1061.2.013	9401-1717	EI009	UWCE

Frequency Measurements:



Frequency Verification					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	125.30	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x00049020

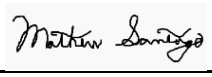
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

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Web Site	www.keystonecompliance.com

Test Personnel	
Name	Mathew Santiago
Title	EMC Test Engineer
Signature	

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x00049020

Date of Issue: November 11, 2025

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FSK Frequency Set 1					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	125.30	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Test Report

Model: UMRR-11 T44

Part Number / Serial Number:
0x000489CA

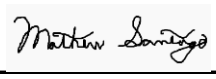
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

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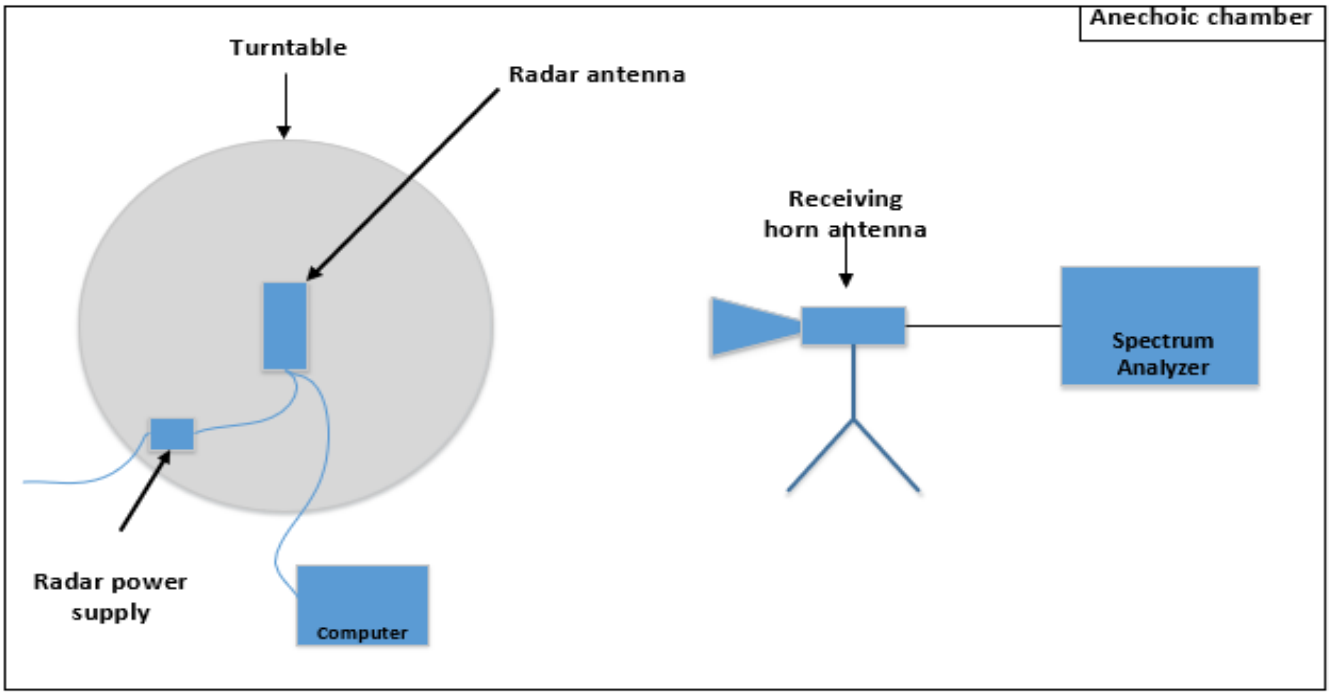
Test Setup Diagram..... 4

Test Equipment Utilized..... 4

Frequency Characteristics Test Results..... 5

Test Setup Diagram

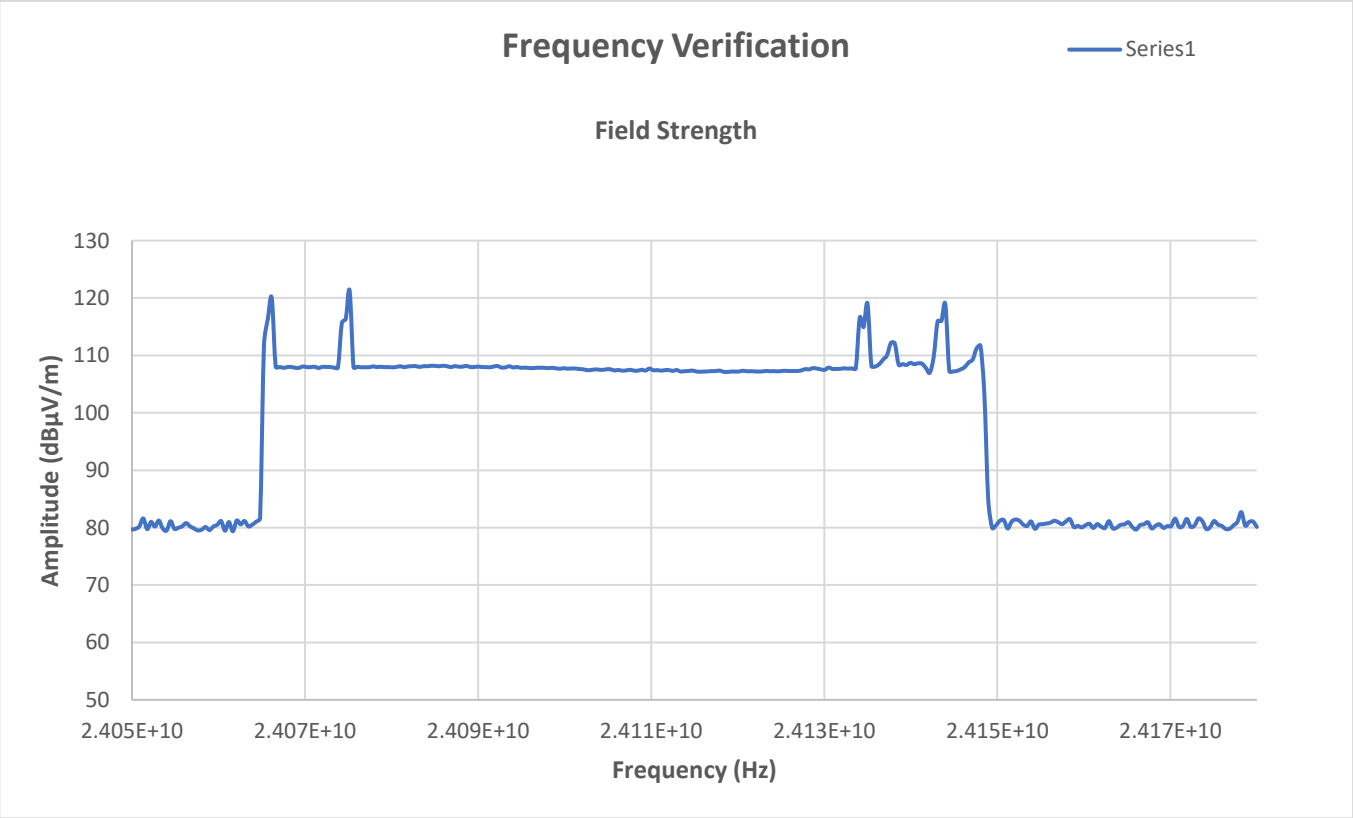




Test Equipment Utilized

Description	Manufacturer	Model #	Serial #	Asset #	Cal. Due Date
EMC Analyzer	Agilent	E7405	US40240238	EB046	1/29/2026
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Turntable Controller	EMCO	1061.2.013	9401-1717	EI009	UWCE

Frequency Measurements:



Frequency Verification					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	83.3	121.29	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x000489CA

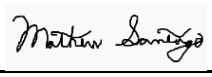
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Model: UMRR-11 T44

Part Number / Serial Number:
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Date of Issue: November 11, 2025

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Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	83.3	121.29	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Test Report

Model: UMRR-11 T44

Part Number / Serial Number:
0x00049023

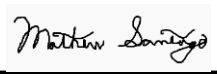
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Date of Issue: November 11, 2025

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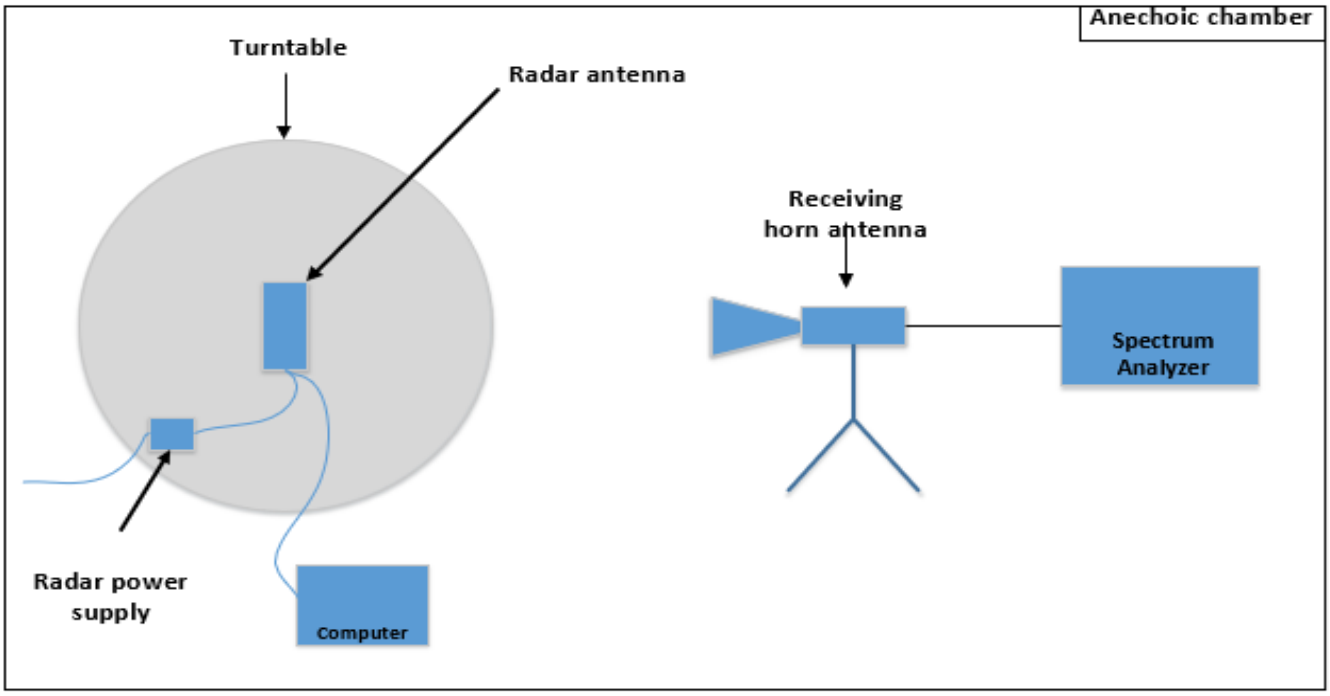
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Test Equipment Utilized..... 4

Frequency Characteristics Test Results..... 5

Test Setup Diagram

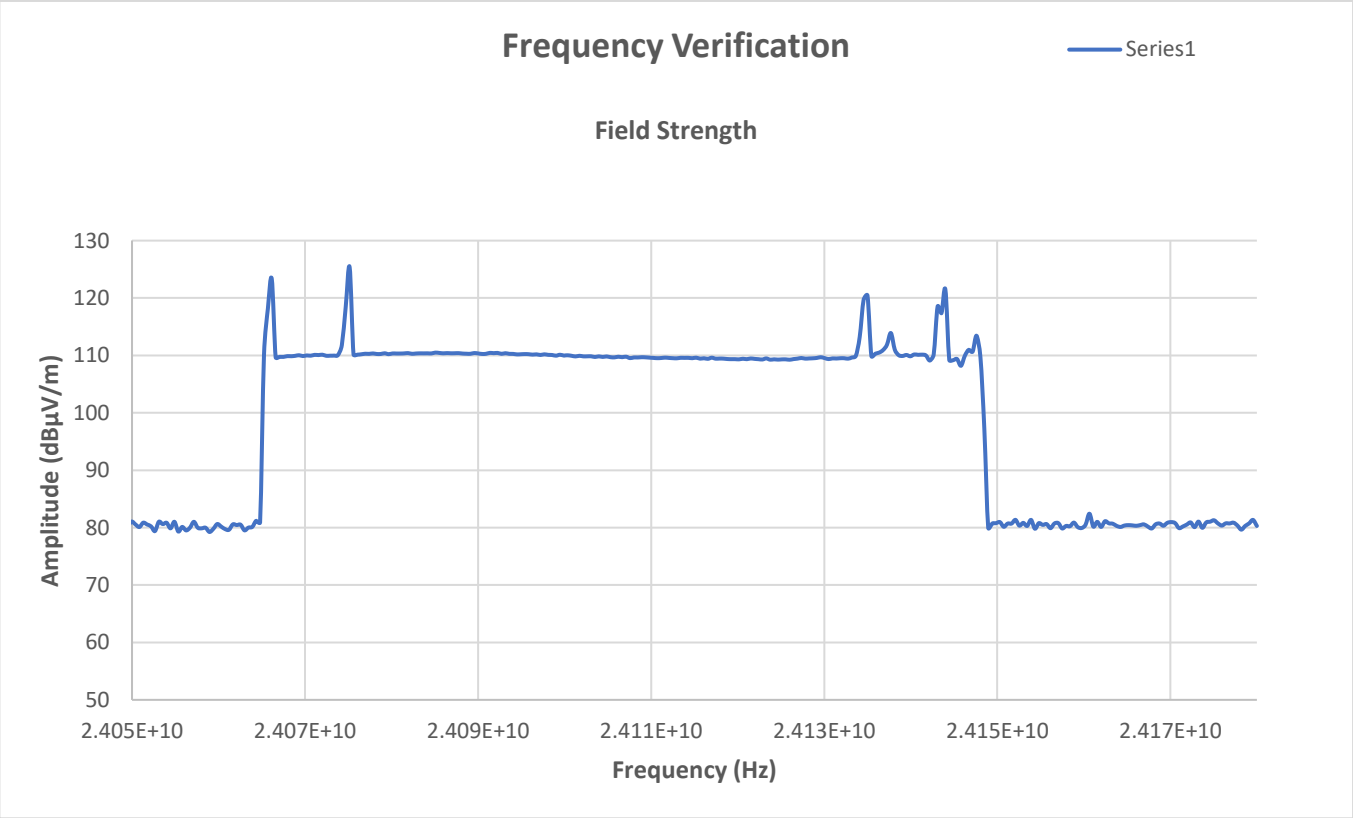




Test Equipment Utilized

Description	Manufacturer	Model #	Serial #	Asset #	Cal. Due Date
EMC Analyzer	Agilent	E7405	US40240238	EB046	1/29/2026
DRG Horn Antenna	ETS Lindgren	3116	00026390	EE017	5/21/2026
Pre-Amplifier	Keystone Compliance	PA-1	0002	EG003	6/30/2026
Turntable Controller	EMCO	1061.2.013	9401-1717	EI009	UWCE

Frequency Measurements:



Frequency Verification					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	125.36	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x00049023

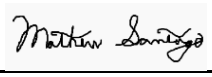
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

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	Applus+ Keystone
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	Mathew Santiago
Title	EMC Test Engineer
Signature	

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x00049023

Date of Issue: November 11, 2025

This speed measuring device has been tested and verified to be functioning in accordance with the manufacture's specifications.

The frequency measurements performed and reported within this report demonstrate that the SmartMicro UMRR-11 T44 radar system has an accuracy of less than or equal to 1 mph up to 100 mph and 1% accuracy thereafter up to 199 mph maximum.

FSK Frequency Set 1					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	125.36	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Test Report

Model: UMRR-11 T44

Part Number / Serial Number:
0x000488C5

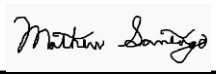
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
1150 N. Alma School Rd
Mesa, AZ 85201

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

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Address	131 North Columbus Innerbelt
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Email	questions@keystonecompliance.com
Web Site	www.keystonecompliance.com

Test Personnel	
Name	Mathew Santiago
Title	EMC Test Engineer
Signature	

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Revision	Date	Description	Revised By
N/C	##############	Initial Release	Mathew Santiago

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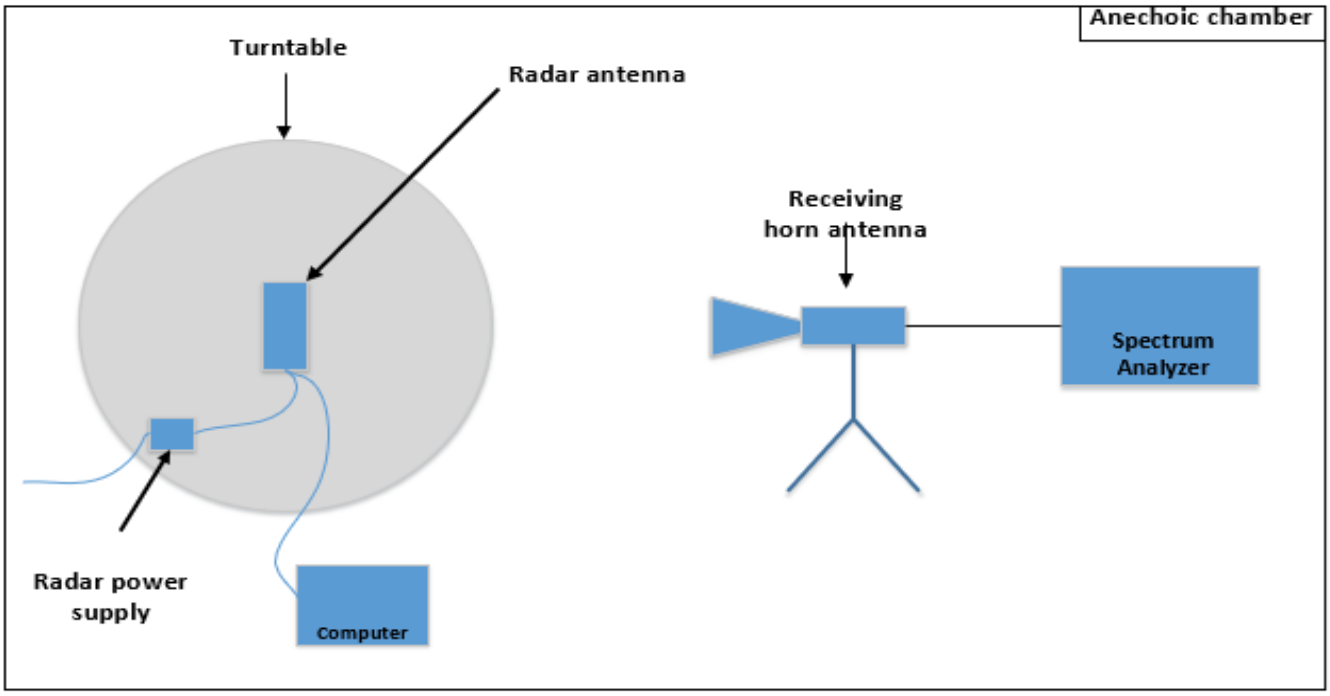
Test Setup Diagram..... 4

Test Equipment Utilized..... 4

Frequency Characteristics Test Results..... 5

Test Setup Diagram

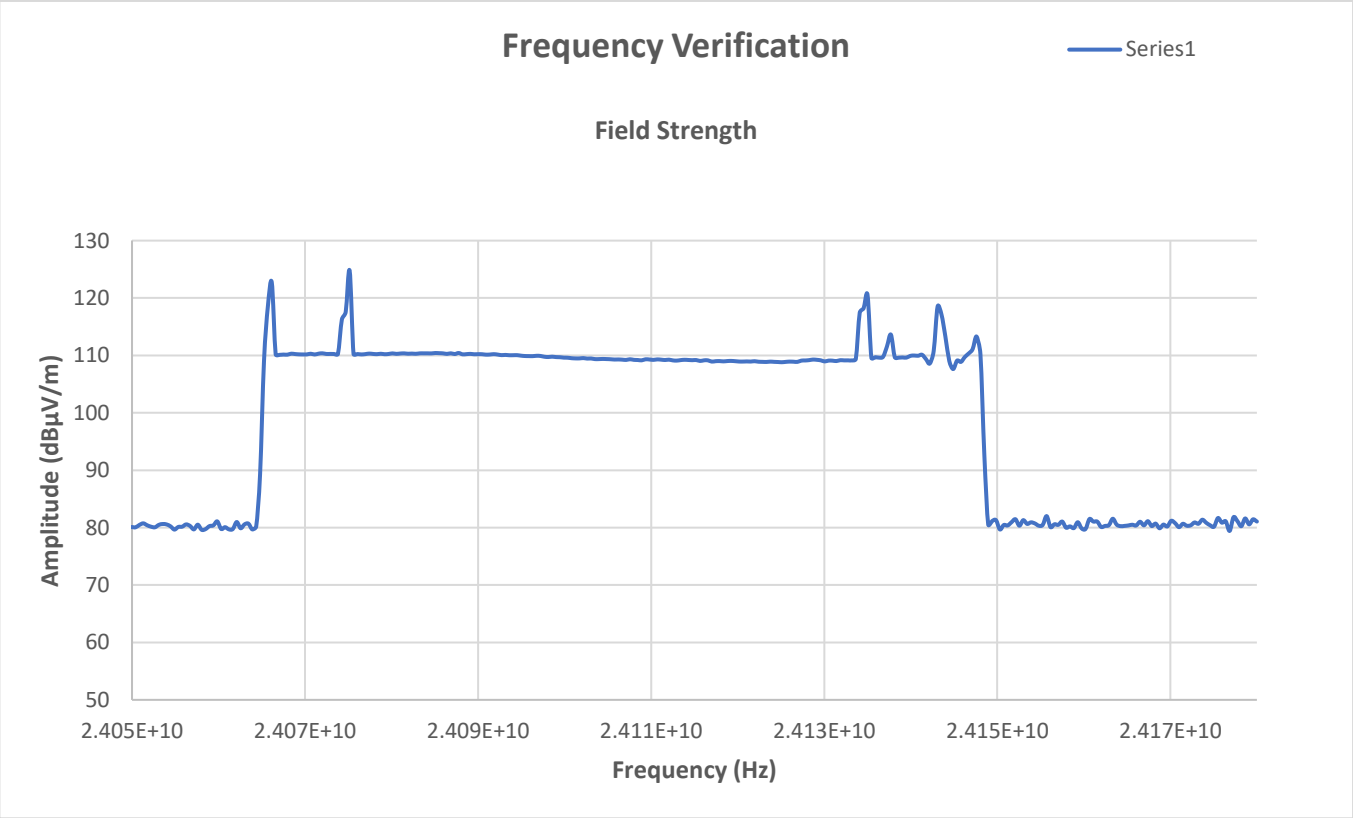




Test Equipment Utilized

Description	Manufacturer	Model #	Serial #	Asset #	Cal. Due Date
EMC Analyzer	Agilent	E7405	US40240238	EB046	1/29/2026
DRG Horn Antenna	ETS Lindgren	3116	00026390	EE017	5/21/2026
Pre-Amplifier	Keystone Compliance	PA-1	0002	EG003	6/30/2026
Turntable Controller	EMCO	1061.2.013	9401-1717	EI009	UWCE

Frequency Measurements:



Frequency Verification					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	124.76	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x000488C5

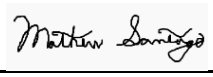
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
1150 N. Alma School Rd
Mesa, AZ 85201

Attention of: **Engineering Department**
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Test Facility	
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Address	131 North Columbus Innerbelt
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Email	questions@keystonecompliance.com
Web Site	www.keystonecompliance.com

Test Personnel	
Name	Mathew Santiago
Title	EMC Test Engineer
Signature	

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x000488C5

Date of Issue: November 11, 2025

This speed measuring device has been tested and verified to be functioning in accordance with the manufacture's specifications.

The frequency measurements performed and reported within this report demonstrate that the SmartMicro UMRR-11 T44 radar system has an accuracy of less than or equal to 1 mph up to 100 mph and 1% accuracy thereafter up to 199 mph maximum.

FSK Frequency Set 1					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	124.76	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Test Report

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004B054

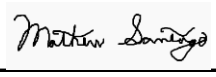
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
1150 N. Alma School Rd
Mesa, AZ 85201

Attention of: **Engineering Department**
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Test Personnel	
Name	Mathew Santiago
Title	EMC Test Engineer
Signature	

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Revision	Date	Description	Revised By
N/C	##############	Initial Release	Mathew Santiago

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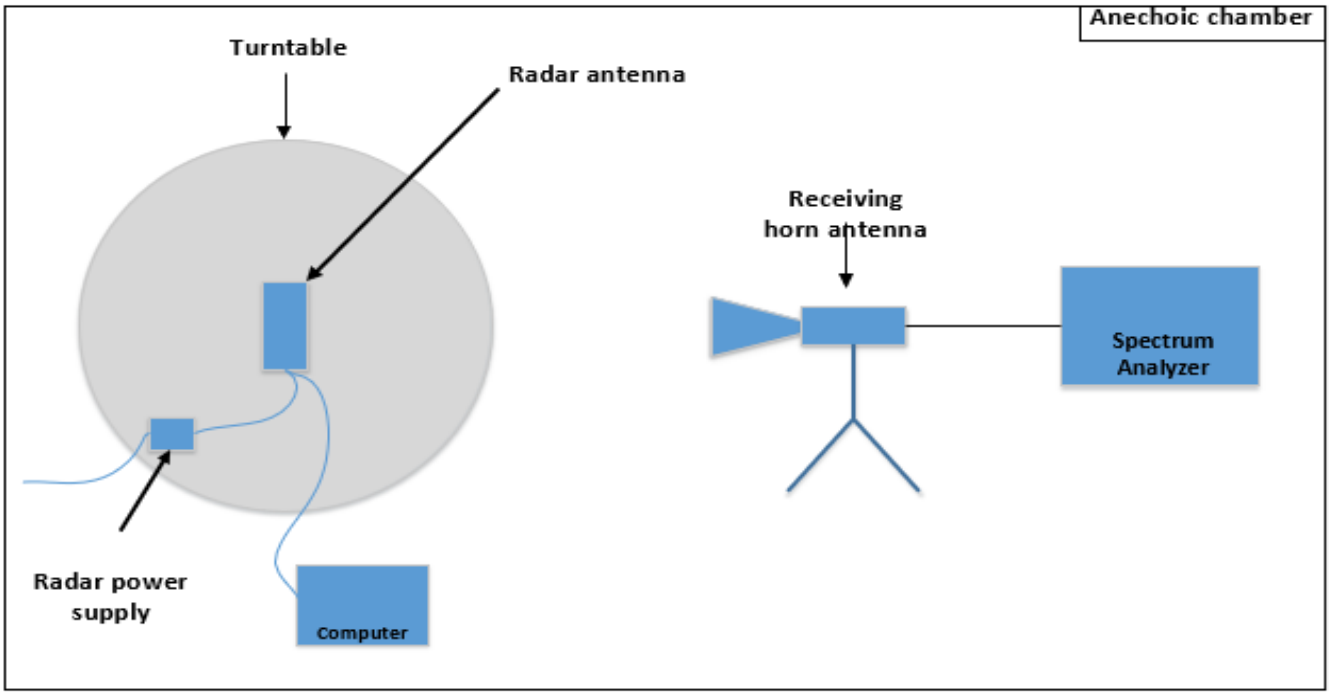
Test Setup Diagram..... 4

Test Equipment Utilized..... 4

Frequency Characteristics Test Results..... 5

Test Setup Diagram

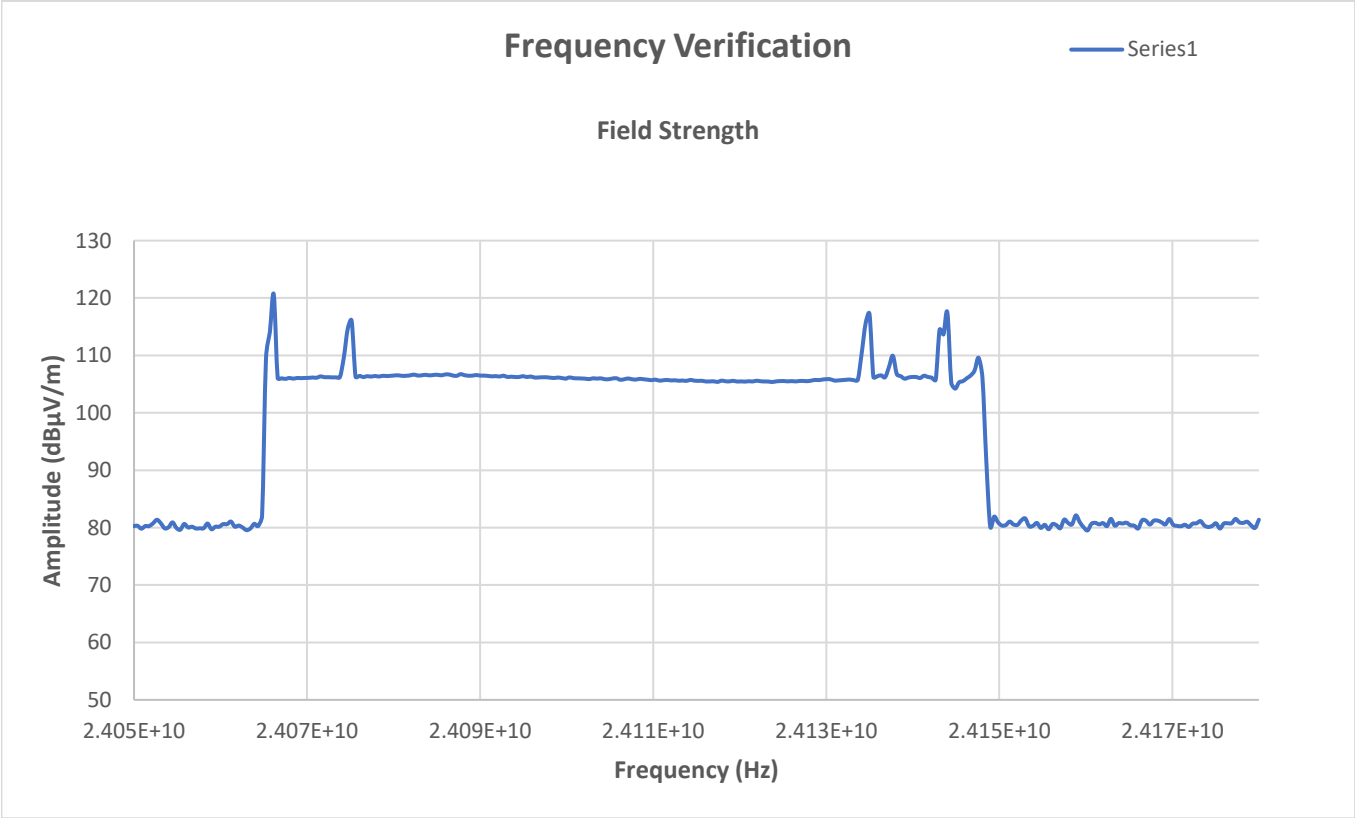




Test Equipment Utilized

Description	Manufacturer	Model #	Serial #	Asset #	Cal. Due Date
EMC Analyzer	Agilent	E7405	US40240238	EB046	1/29/2026
DRG Horn Antenna	ETS Lindgren	3116	00026390	EE017	5/21/2026
Pre-Amplifier	Keystone Compliance	PA-1	0002	EG003	6/30/2026
Turntable Controller	EMCO	1061.2.013	9401-1717	EI009	UWCE

Frequency Measurements:



Frequency Verification					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	120.61	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004B054

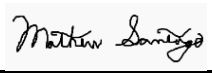
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
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Web Site	www.keystonecompliance.com

Test Personnel	
Name	Mathew Santiago
Title	EMC Test Engineer
Signature	

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x0004B054

Date of Issue: November 11, 2025

This speed measuring device has been tested and verified to be functioning in accordance with the manufacture's specifications.

The frequency measurements performed and reported within this report demonstrate that the SmartMicro UMRR-11 T44 radar system has an accuracy of less than or equal to 1 mph up to 100 mph and 1% accuracy thereafter up to 199 mph maximum.

FSK Frequency Set 1					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	120.61	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Test Report

Model: UMRR-11 T44

Part Number / Serial Number:
0x00048E5C

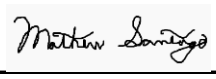
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
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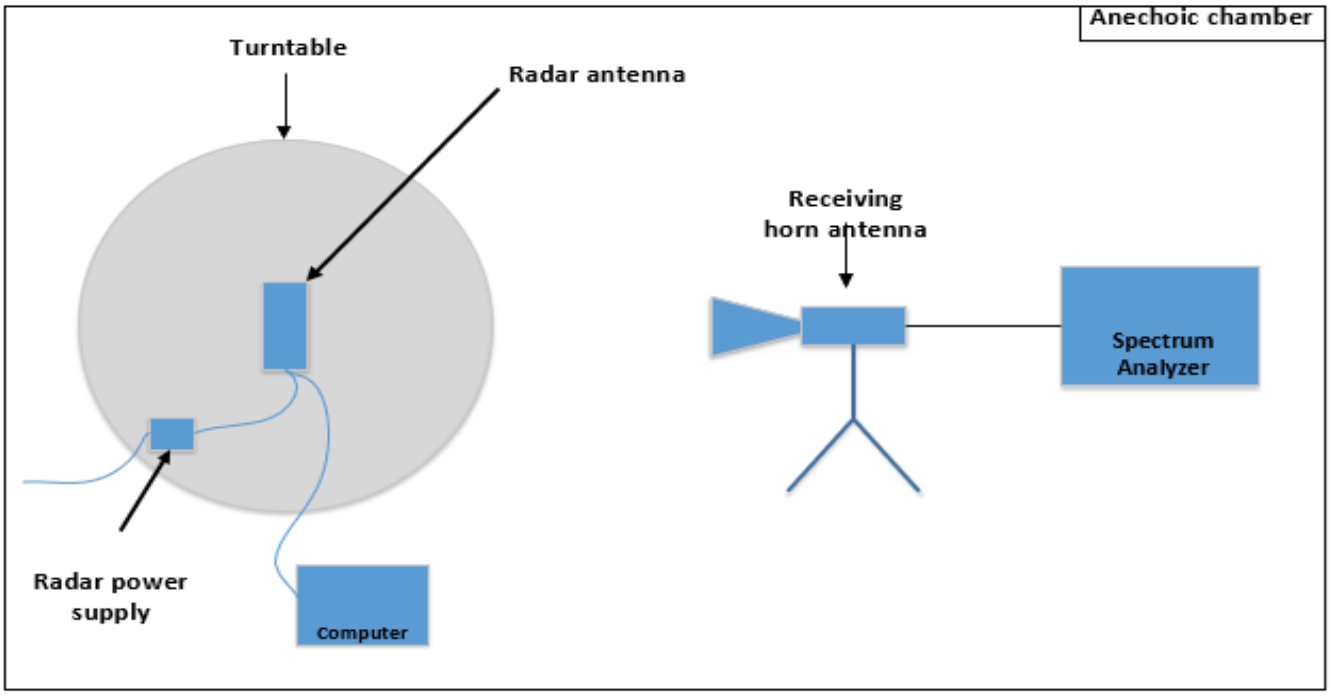
Test Setup Diagram..... 4

Test Equipment Utilized..... 4

Frequency Characteristics Test Results..... 5

Test Setup Diagram

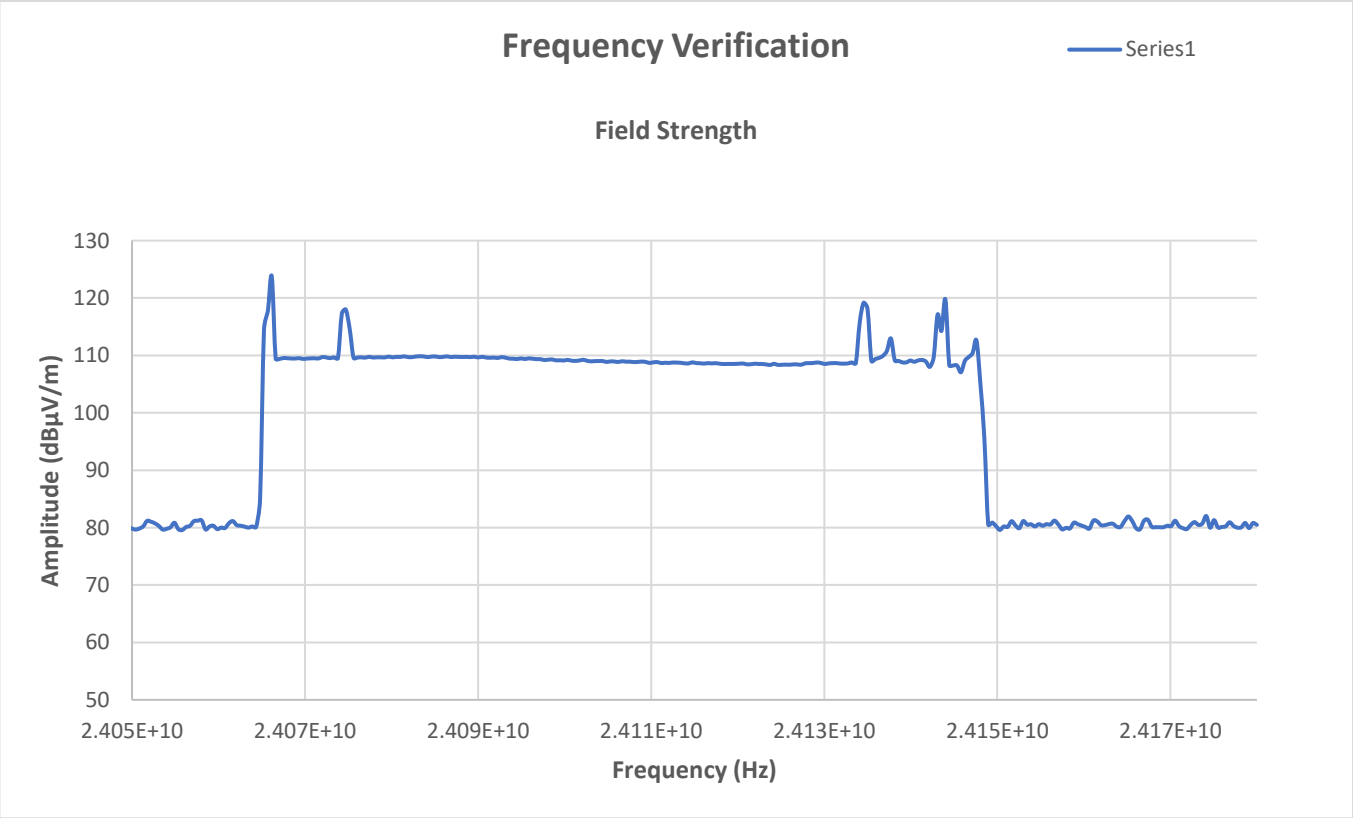




Test Equipment Utilized

Description	Manufacturer	Model #	Serial #	Asset #	Cal. Due Date
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Frequency Measurements:



Frequency Verification					
Nominal Frequency Range (GHz)	**Measured Center Frequency (GHz)**	**Measured Frequency Bandwidth @ 20dB (MHz)**	**Amplitude (dBµV)**	**Bandwidth Limit (MHz)**	**Results**
24.075-24.175	24.107	82.8	123.75	84.7 +/- 4.8	PASS

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x00048E5C

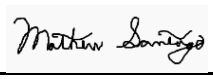
Description:
Radar Characteristics Validation
In compliance with:
SMS UMRR-11 T44 / UMRR-12 T48 RADAR QUALIFICATION USING SPECRA

Date of Issue: November 11, 2025

Owner of EUT: **Verra Mobility**
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Web Site	www.keystonecompliance.com

Test Personnel	
Name	Mathew Santiago
Title	EMC Test Engineer
Signature	

Radar Sensor Calibration Verification
Certificate of Calibration

Model: UMRR-11 T44

Part Number / Serial Number:
0x00048E5C

Date of Issue: November 11, 2025

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FSK Frequency Set 1					
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