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Report of Measurements

FCC Part 15, Subpart C, Section 15.207 / 15.209

On

IMU100 Tester
850 kHz Data Circuit with VCC
FCC ID: 2A8HRS25447-H8-A2

Customer Name: Siemens Mobility

Customer P.O: 4510076816

Date of Report: June 19, 2024

Test Report No: R-3578P-7, Rev. A

Test Start Date: November 7, 2022

Test Finish Date: June 14, 2024

Certification and Signatures We certify that this report is a true representation of the results obtained from the tests of the equipment stated. We further certify that the measurements shown in this report were made in accordance with the procedures indicated and vouch for the qualifications of all Retlif Testing Laboratories personnel taking them.

Richard J. Reitz Director of Engineering iNARTE Electromagnetic Compatibility Engineer EMC-050739-E	Scott Wentworth Branch Manager

Non-Warranty Provision
The testing services have been performed, findings obtained and reports prepared in accordance with generally accepted laboratory principles and practices. This warranty is in lieu of all others, either expressed or implied.

Non-Endorsement
This test report contains only findings and results arrived at after employing the specific test procedures and standards listed herein. It is not intended to constitute a recommendation, endorsement or certification of the product or material tested. This test report must not be used by the client to claim product endorsement by ANAB or any agency of the U.S. Government.

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Technical Information

Report Number:	R-3578P-7, Rev. A
Applicant:	Siemens Mobility, Inc.
Address:	162 East Bridge Street
	Suite 200
	Homestead, PA 15120
FRN:	0032806093
Test Sample:	IMU100 Tester
Model Number:	S25447-H8-A2 (IMU 100); S25447-H80-A2-02 (Antenna)
Frequency Range of Operation:	850 kHz
Equipment Class:	DCD – Part 15 Low Power Transmitter below 1705 kHz
Equipment Use:	Test Equipment
Power Requirements:	120 VAC, 60 Hz
Transmission Protocols/Modulation	850 kHz: Data Circuit (Binary Coded FSK 50 kBd)

Test Specifications:
FCC Rules and Regulations Part 15, Subpart C, Section 15.207 / 15.209

Test Procedures:
ANSI C63.10: 2013

Test Facility:
Retlif Testing Laboratories
3131 Detwiler Road
Harleysville, PA 19438

FCC Registered Designation Number: US2321

Tests Performed

The test methods that were performed to demonstrate compliance with the FCC Rules are shown below:

FCC Rule Section	Test Method	EUT Component / Operating Frequency	Test Result
15.207	ANSI C63.10, 6.2, Conducted Emissions, 150 kHz to 30 MHz	System	Pass
15.209	ANSI C63.10, 6.4 Radiated Emissions from Unlicensed Wireless Devices Below 30 MHz	850 kHz with VCC	Pass
		850 kHz Standalone	Pass

All test methods listed above are included in Retlif Testing Laboratories ANSI National Accreditation Board (ANAB), ISO/IEC 17025 Scope of Accreditation, Certificate Number: L2320.02.

General Test Information

Part 15.31 Measurement Standards

- Testing was performed using the procedures specified in ANSI C63.10-2013 in accordance with 15.31(a)(3).
- Testing was performed with the transmitter continuously transmitting at the selected frequency in accordance with 15.31(c).
- Field strength measurements were made on an Open Area Test Site in accordance with 15.31(d).
- Field strength measurements were made at a distance closer than specified in the regulations. The results were extrapolated to the specified test distance by using the square of an inverse linear distance extrapolation factor (40 dB/decade)

  Sample Calculation:
  - Extrapolation Factor (dB) = 40 Log (D_{Meas} / D_{Spec})

  Where:
  - D_{Meas} = Distance at which measurements were performed (10 Meters)
  - D_{Spec} = Distance at which the limit is specified (300 Meters)

  - Extrapolation Factor (dB) = 40 Log (10 / 300)
    = 40 Log (0.033)
    = 40 * -1.488
    = - 59.08

- The Device under test was positioned and adjusted to maximize the level of emissions in accordance with 15.31(g).
- The test sample operates at two (2) discrete frequencies under Part 15. All testing outlined herein was performed with the device under test operating at each of these frequencies.

Part 15.33 Frequency range of radiated measurements

- The radio frequency spectrum was investigated from 9 kHz to the 10th harmonic of the highest fundamental frequency as specified in 15.33(a)(1).

Part 15.35 Measurement detector function and bandwidths

- On frequencies below or equal to 1000 MHz, measurements were made utilizing either a peak or quasi-peak detector and associated bandwidths with the exception of measurements in the frequency bands of 9 to 90 kHz and 110 to 490 kHz in which an average detector was utilized.

Requirements and Test Results

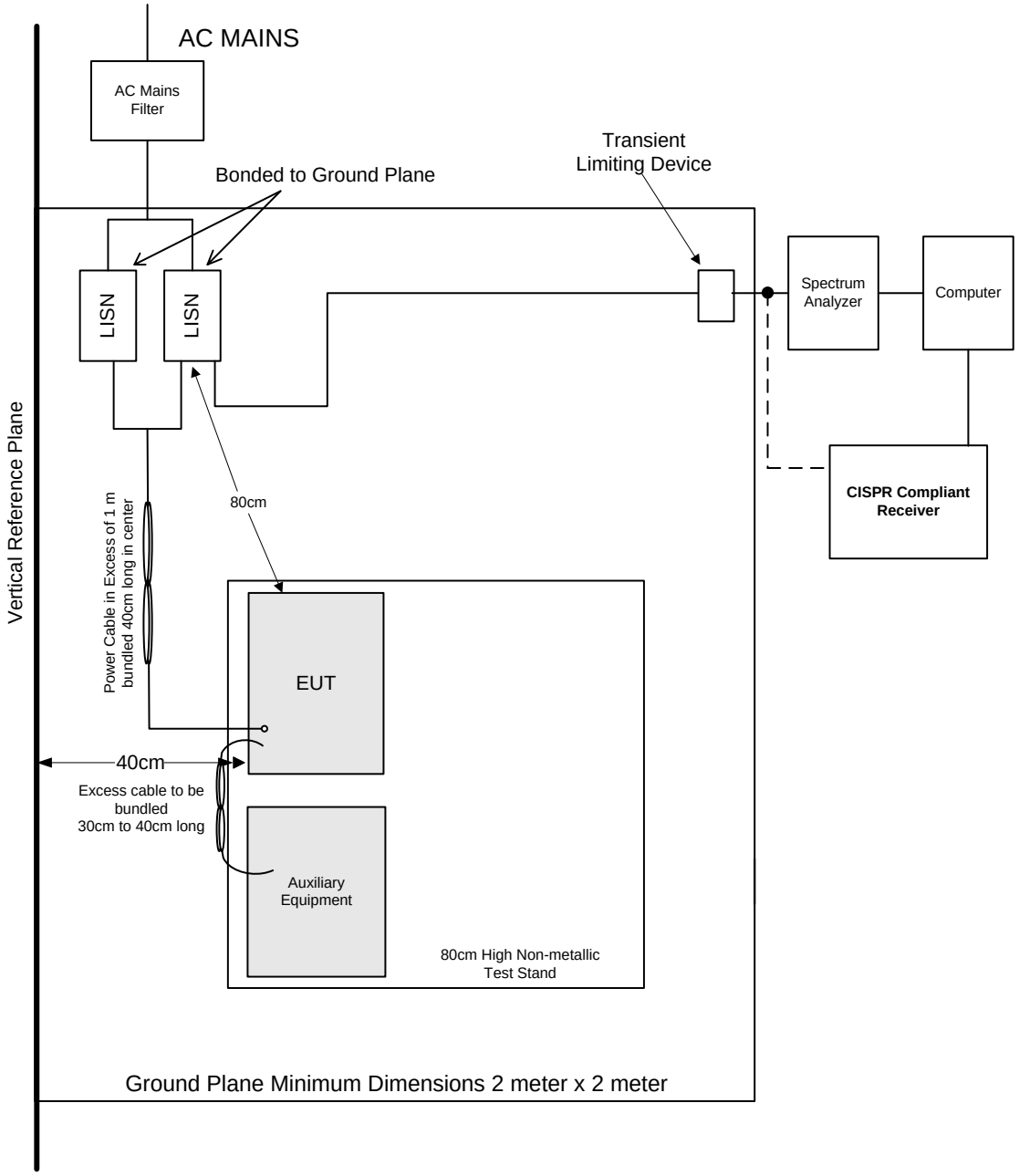
Requirement 15.207(a) - Conducted Limits

For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits shown in Table 2, as measured using a 50 µH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of the paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applied at the boundary between the frequency ranges.

Table 1 - Conducted Emission Limits

Frequency of Emission (MHz)	**Conducted Limit (dBµV)**	
	Quasi-Peak	Average
0.15 to 0.5	66 to 56*	56 to 46*
0.5 to 5	56	46
5 to 30	60	50
*Decreases due to logarithm of the frequency		

- Results:
  The conducted emissions observed did not exceed the limits specified in Table 2.



Equipment List

EN	Manufacturer	Model No.	Description	Serial No.	Due Date
8079	ROHDE &	ESH3	RECEIVER, EMI, 9 kHz - 30 MHz	861742/012	6/30/2024
8366A	RETLIF	20' BNC	CABLE, COAXIAL, 10 KHz - 1 GHz	n/a	5/31/2025
8496	NARDA MICROWAVE	768-10	ATTENUATOR, COAXIAL, 10 dB, DC - 11 GHz, 20 W	04105	6/30/2024
8619	OMEGA	OM-73	HYGROMETER, -20 to 70 deg. C, 0-99% RH	051442102C	4/30/2025
8633	SOLAR ELECTRONICS	21106-50-BP-25-BNC	LISN, 50 uH, 150 kHz - 30 MHz	21106141201	9/30/2024
8634	SOLAR ELECTRONICS	21106-50-BP-25-BNC	LISN, 50 uH, 150 kHz - 30 MHz	21106141202	9/30/2024
8749	RIGOL	DSA832E	ANALYZER, SPECTRUM, 9 kHz - 3.2 GHz	DSA8G201800133	5/31/2025

EMISSIONS TEST DATA SHEET	
Test Specification:	FCC Part 15, Subpart C, Section 15.207(a), Conducted Emissions
Method:	ANSI C63.4, Section 7., AC power-line conducted emission measurements
Job Number/Customer:	R – 3678P-7 / Siemens Mobility
Test Sample:	IMU 100 Test Device
Model Number:	S25447-H8-A2 (IMU 100); S25447-H80-A2-02 (Antenna)
Serial Number:	0225
Operating Mode:	Transmit Mode
Technician:	M. Nowak
Date(s):	6/14/24
Temperature:	22.5 ºC
Relative Humidity:	54.9%
Lead Tested:	120 VAC, 60 Hz, Hot
The frequency range was scanned from 0.15 MHz to 30 MHz. The six highest emissions relative to the limit are presented. The emissions observed from the EUT do not exceed the specified limits.	

Frequency	Detector	Meter Reading	Total Correction Factor	Corrected Reading	Limit	Margin
MHz	–	dBµV	dB	dBµV	dBµV	dB
0.1758	Peak	43.5	10.1	53.6*	–	–
0.1758	Quasi-Peak	32.5	10.1	42.6	64.7	22.1
0.1758	Average	13.6	10.1	23.7	54.7	31.0
0.1856	Peak	41.5	10.1	51.6*	–	–
0.1856	Quasi-Peak	25.5	10.1	35.6	64.2	28.6
0.1856	Average	21.6	10.1	31.7	54.2	22.5
0.2330	Peak	43.1	10.1	53.2*	–	–
0.2330	Quasi-Peak	24.5	10.1	34.6	62.3	27.7
0.2330	Average	23.2	10.1	33.3	52.3	19.0
0.4645	Peak	31.8	10.1	41.9*	–	–
0.4645	Quasi-Peak	26.9	10.1	37.0	56.6	19.6
0.4645	Average	23.9	10.1	34.0	46.6	12.6
0.9242	Peak	34.2	10.1	44.3*	–	–
0.9242	Quasi-Peak	29.1	10.1	39.2	56.0	16.8
0.9242	Average	27.0	10.1	37.1	46.0	8.9
29.8000	Peak	37.2	10.6	47.8*	–	–
29.8000	Quasi-Peak	31.5	10.6	42.1	60.0	17.9
29.8000	Average	27.6	10.6	38.2	50.0	11.8

* Peak measurements are recorded for informational purposes only.

EMISSIONS TEST DATA SHEET	
Test Specification:	FCC Part 15, Subpart C, Section 15.207(a), Conducted Emissions
Method:	ANSI C63.4, Section 7., AC power-line conducted emission measurements
Job Number/Customer:	R – 3678P-7 / Siemens Mobility
Test Sample:	IMU 100 Test Device
Part Number:	S25447-H8-A2 (IMU 100); S25447-H80-A2-02 (Antenna)
Serial Number:	0225
Operating Mode:	Transmit Mode
Technician:	M. Nowak
Date(s):	6/14/24
Temperature:	22.5 ºC
Relative Humidity:	54.9%
Lead Tested:	120 VAC, 60 Hz, Neutral
The frequency range was scanned from 0.15 MHz to 30 MHz. The six highest emissions relative to the limit are presented. The emissions observed from the EUT do not exceed the specified limits.	

Frequency	Detector	Meter Reading	Total Correction Factor	Corrected Reading	Limit	Margin
MHz	–	dBµV	dB	dBµV	dBµV	dB
0.1758	Peak	44.1	10.1	54.2*	–	–
0.1758	Quasi-Peak	36.2	10.1	46.3	64.7	18.4
0.1758	Average	13.7	10.1	23.8	54.7	30.9
0.1856	Peak	47.8	10.1	57.9*	–	–
0.1856	Quasi-Peak	40.0	10.1	50.1	64.2	14.1
0.1856	Average	31.6	10.1	41.7	54.2	12.5
0.2330	Peak	42.6	10.1	52.7*	–	–
0.2330	Quasi-Peak	21.4	10.1	31.5	62.3	30.8
0.2330	Average	17.5	10.1	27.6	52.3	24.7
0.4645	Peak	32.2	10.1	42.3*	–	–
0.4645	Quasi-Peak	26.6	10.1	36.7	56.6	19.9
0.4645	Average	19.6	10.1	29.7	46.6	16.9
0.9242	Peak	28.1	10.1	38.2*	–	–
0.9242	Quasi-Peak	24.4	10.1	34.5	56.0	21.5
0.9242	Average	23.4	10.1	33.5	46.0	12.5
29.8000	Peak	36.9	10.6	47.5*	–	–
29.8000	Quasi-Peak	31.5	10.6	42.1	60.0	17.9
29.8000	Average	25.4	10.6	36.0	50.0	14.0

* Peak measurements are recorded for informational purposes only.

Requirements and Test Results

Requirement: 15.209 Radiated Emissions Limits; General Requirements

(a) Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

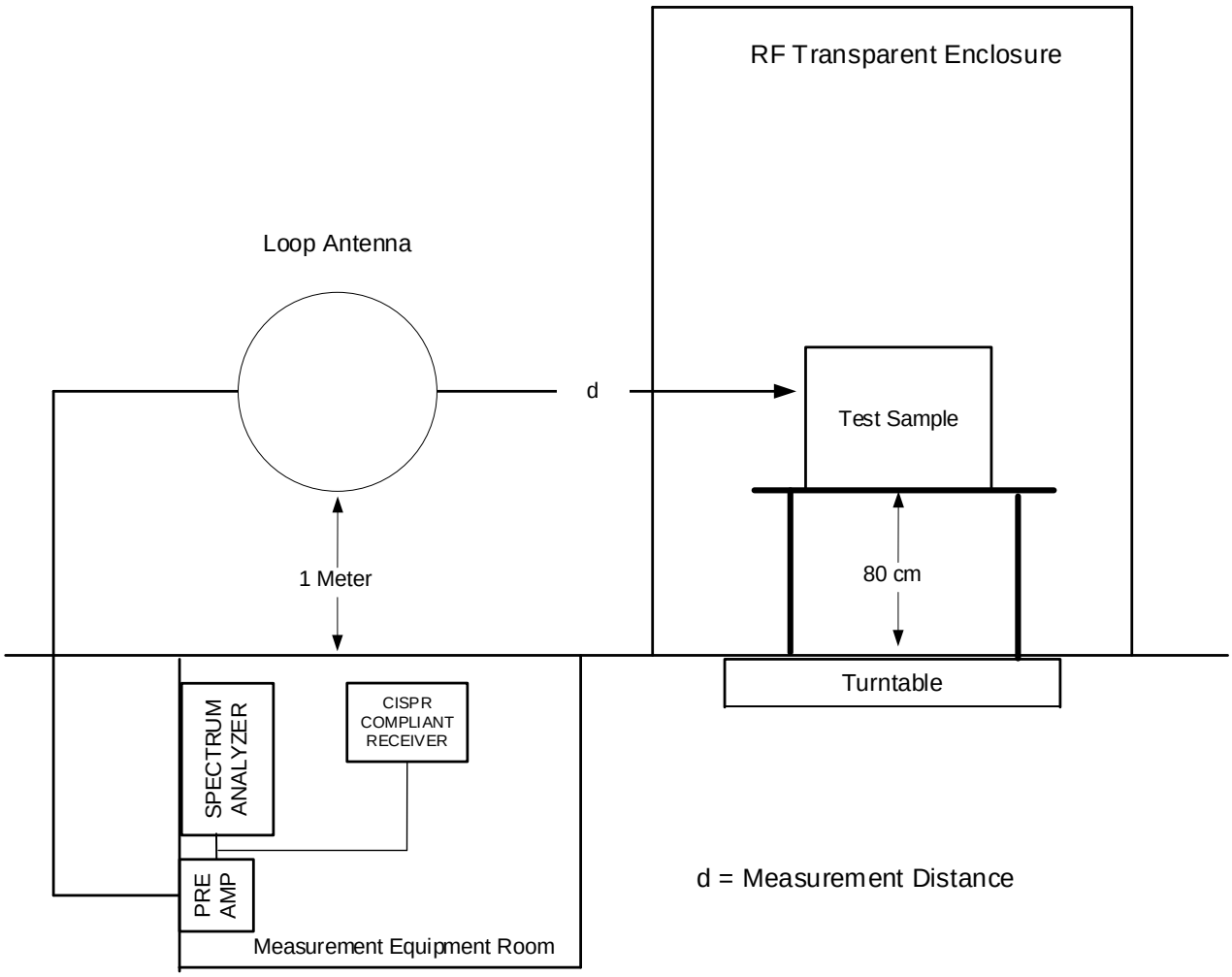
Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100 **	3
88-216	150 **	3
216-960	200 **	3
Above 960	500	3

Limit Calculation:

- 850 kHz

  Limit (uV/m) = 24000 / 850 = 28.2 uV/m

- Results:
  The emissions observed from the EUT do not exceed the specified limits when measured in a peak detector function.



EQUIPMENT LIST

EN	Manufacturer	Model No.	Description	Serial No.	Due Date
3207	ETS / EMCO	6502	ANTENNA, ACTIVE LOOP, 9 kHz - 30 MHz	1033	5/31/2023
5272	ROHDE &	ESPC	RECEIVER, EMI, 150 kHz - 1 GHz	843820/023	3/31/2023
8300	RETLIF	RPA	OPEN AREA TEST SITE, ATTENUATION, 3/10 Meter OATS	N/A	5/31/2024
8300C	UNKNOWN	3 METER CABLE	CABLE, COAXIAL, 3/10 METER	N/A	2/28/2023
8644	AGILENT / HP	85662A	ANALYZER, SPECTRUM, 100 Hz - 22 GHz	2848A18175	9/30/2023
8644A	AGILENT / HP	8566B	ANALYZER, SPECTRUM, 100 Hz - 22.5 GHz	2937A06124	9/30/2023
8668	DIGI-SENSE	20250-31	HYGROMETER, 0 - 50 deg. c, 10 - 90 % RH	140908984	10/31/2023

IMU Antenna Standalone, Operating at 850 kHz

EMISSIONS TEST DATA SHEET	
Method:	FCC Part 15.209(a)
Job Number/Customer:	R-3578P-7/ Siemens Mobility
Test Sample:	IMU100 Tester
Model Number:	S25447-H8-A2 (IMU 100); S25447-H80-A2-02 (Antenna)
Serial Number:	0225
Operating Mode:	IMU100 Tester Transmitting at 850 kHz
Technician:	M. Nowak
Date(s):	11/9/22
Temperature:	15.5 ºC
Relative Humidity:	38%
Detector:	Peak
Test Distance:	3m

Notes: The frequency range was scanned from 9kHz to 8.5 MHz
The emissions observed from the EUT do not exceed the limits specified.
*Noise floor measurement, minimum sensitivity of measurement system.
The limit shown for below 0.490 MHz is for a measurement distance of 300m.

Frequency	Antenna Pol / Height	EUT Orientation	Peak Meter Reading @ 3 M	Correction Factor	Distance Correction	Corrected Reading @ 30 M	Converted Reading	Limit @ 30m
MHz	(Parallel/Perpendicular/Horizontal)	Degrees	dBuV	dB	dB	dBuV/m	uV/m	uV/m
0.009								266.67
I								I
0.490								4.90
0.490								48.98
I								I
0.850	Parallel	199.9	36.0	11.7	-40.00	7.7	2.43	28.2
0.850	Perpendicular	153.2	40.7	11.7	-40.00	12.4	4.17	28.2
0.850	Horizontal	223.7	42.8	11.7	-40.00	14.5	5.31	28.2
I								I
1.700	Parallel	145.9	40.6	11.7	-40.00	12.3	4.13	14.12
1.700	Perpendicular	96.8	37.4	11.7	-40.00	9.1	2.86	14.12
1.700	Horizontal	174.2	30.3	11.7	-40.00	2.0	1.26	14.12
I								I
1.705								14.08
1.705								30
I								I
*2.550	Parallel	180.0	28.3	11.8	-40.00	0.1	1.03	I
*2.550	Perpendicular	180.0	27.8	11.8	-40.00	-0.4	0.96	I
*2.550	Horizontal	180.0	22.5	11.8	-40.00	-5.7	0.52	I
I								I
*3.400	Parallel	180.0	31.0	11.8	-40.00	2.8	1.39	I
*3.400	Perpendicular	180.0	29.9	11.8	-40.00	1.7	1.22	I
*3.400	Horizontal	180.0	22.2	11.8	-40.00	-6.0	0.51	I
I								I
*4.250	Parallel	180.0	23.4	11.8	-40.00	-4.8	0.58	I
*4.250	Perpendicular	180.0	23.7	11.8	-40.00	-4.5	0.60	I
*4.250	Horizontal	180.0	17.2	11.8	-40.00	-11.0	0.29	I
I								I
*5.100	Parallel	180.0	22.2	11.9	-40.00	-5.9	0.51	I
*5.100	Perpendicular	180.0	25.1	11.9	-40.00	-3.0	0.71	I
*5.100	Horizontal	180.0	17.6	11.9	-40.00	-10.5	0.30	I
I								I
*5.950	Parallel	180.0	28.7	11.9	-40.00	0.6	1.08	I
*5.950	Perpendicular	180.0	28.4	11.9	-40.00	0.3	1.05	30

Frequency	Antenna Pol / Height	EUT Orientation	Peak Meter Reading @ 3 M	Correction Factor	Distance Correction	Corrected Reading @ 30 M	Converted Reading	Limit @ 30m
MHz	(Parallel/Perpendicular/Horizontal)	Degrees	dBuV	dB	dB	dBuV/m	uV/m	uV/m
*5.950	Horizontal	180.0	15.4	11.9	-40.00	-12.7	0.24	30
I								I
*6.800	Parallel	180.0	24.7	11.9	-40.00	-3.4	0.68	I
*6.800	Perpendicular	180.0	28.8	11.9	-40.00	0.7	1.10	I
*6.800	Horizontal	180.0	18.7	11.9	-40.00	-9.4	0.34	I
I								I
*7.650	Parallel	180.0	25.7	11.9	-40.00	-2.4	0.76	I
*7.650	Perpendicular	180.0	28.9	11.9	-40.00	0.8	1.11	I
*7.650	Horizontal	180.0	17.5	11.9	-40.00	-10.6	0.30	I
I								I
*8.500	Parallel	180.0	27.6	11.9	-40.00	-0.5	0.95	I
*8.500	Perpendicular	180.0	23.8	11.9	-40.00	-4.3	0.61	I
*8.500	Horizontal	180.0	13.9	11.9	-40.00	-14.2	0.20	I
I								I
8.50								30

EMISSIONS TEST DATA SHEET

Method:	FCC Part 15.209(a)
Job Number/Customer:	R-3578P-7/ Siemens Mobility
Test Sample:	IMU100 Tester
Model Number:	S25447-H8-A2 (IMU 100); S25447-H80-A2-02 (Antenna)
Serial Number:	0225
Operating Mode:	IMU100 Tester Transmitting at 850 kHz
Technician:	M. Nowak
Date(s):	11/9/22
Temperature:	15.5 ºC
Relative Humidity:	38%
Detector:	Average
Test Distance:	3m

Notes: The frequency range was scanned from 9kHz to 8.5 MHz
The emissions observed from the EUT do not exceed the limits specified.
*Noise floor measurement, minimum sensitivity of measurement system.
The limit shown for below 0.490 MHz is for a measurement distance of 300m.

Frequency	Antenna Pol / Height	EUT Orientation	Avg. Meter Reading @ 3 M	Correction Factor	Distance Correction	Corrected Reading @ 30 M	Converted Reading	Limit @ 30m
MHz	(Parallel/Perpendicular/Horizontal)	Degrees	dBuV	dB	dB	dBuV/m	uV/m	uV/m
0.009								266.67
0.490								4.90
0.490								48.98
0.850	Parallel	199.9	23.9	11.7	-40.00	-4.4	0.61	28.2
0.850	Perpendicular	153.2	23.5	11.7	-40.00	-4.8	0.58	28.2
0.850	Horizontal	223.7	29.3	11.7	-40.00	1.0	1.13	28.2
1.700	Parallel	145.9	29.1	11.7	-40.00	0.8	1.10	14.12
1.700	Perpendicular	96.8	26.3	11.7	-40.00	-2.0	0.80	14.12
1.700	Horizontal	174.2	14.9	11.7	-40.00	-13.4	0.22	14.12
1.705								14.08
1.705								30
*2.550	Parallel	180.0	12.3	11.8	-40.00	-15.9	0.17	
*2.550	Perpendicular	180.0	12.5	11.8	-40.00	-15.7	0.17	
*2.550	Horizontal	180.0	11.2	11.8	-40.00	-17.0	0.15	
*3.400	Parallel	180.0	11.6	11.8	-40.00	-16.6	0.15	
*3.400	Perpendicular	180.0	11.7	11.8	-40.00	-16.5	0.15	
*3.400	Horizontal	180.0	9.9	11.8	-40.00	-18.3	0.13	
*4.250	Parallel	180.0	7.9	11.8	-40.00	-20.3	0.10	
*4.250	Perpendicular	180.0	8.9	11.8	-40.00	-19.3	0.11	
*4.250	Horizontal	180.0	5.9	11.8	-40.00	-22.3	0.08	
*5.100	Parallel	180.0	6.1	11.9	-40.00	-22.0	0.08	
*5.100	Perpendicular	180.0	8.8	11.9	-40.00	-19.3	0.11	
*5.100	Horizontal	180.0	5.8	11.9	-40.00	-22.3	0.08	
*5.950	Parallel	180.0	6.2	11.9	-40.00	-21.9	0.09	
*5.950	Perpendicular	180.0	8.2	11.9	-40.00	-19.9	0.11	
*5.950	Horizontal	180.0	3.7	11.9	-40.00	-24.4	0.07	
*6.800	Parallel	180.0	3.9	11.9	-40.00	-24.2	0.07	30

Frequency	Antenna Pol / Height	EUT Orientation	Avg. Meter Reading @ 3 M	Correction Factor	Distance Correction	Corrected Reading @ 30 M	Converted Reading	Limit @ 30m
MHz	(Parallel/Perpendicular/Horizontal)	Degrees	dBuV	dB	dB	dBuV/m	uV/m	uV/m
*6.800	Perpendicular	180.0	5.6	11.9	-40.00	-22.5	0.08	30
*6.800	Horizontal	180.0	1.9	11.9	-40.00	-26.2	0.05	|
|								|
*7.650	Parallel	180.0	4.1	11.9	-40.00	-24.0	0.07	|
*7.650	Perpendicular	180.0	5.9	11.9	-40.00	-22.2	0.08	|
*7.650	Horizontal	180.0	1.5	11.9	-40.00	-26.6	0.05	|
|								|
*8.500	Parallel	180.0	3.2	11.9	-40.00	-24.9	0.06	|
*8.500	Perpendicular	180.0	4.1	11.9	-40.00	-24.0	0.07	|
*8.500	Horizontal	180.0	0.1	11.9	-40.00	-28.0	0.04	|
|								|
8.50								30

IMU Antenna with VCC, Operating at 850 kHz

EMISSIONS TEST DATA SHEET	
Method:	FCC Part 15.209(a)
Job Number/Customer:	R-3578P-7 / Siemens Mobility
Test Sample:	IMU100 Tester
Model Number:	S25441-M3-A3-01.H (VCC); S25451-C401-B242 (Card File); S25447-H8-A2 (IMU 100); S25447-H80-A2-02 (Antenna)
Serial Number:	6101125087-001 (VCC); A2V00002744893 (Card File); 0225 (IMU 100)
Operating Mode:	VCC Transmitter Operating at 850 kHz, with IMU Antenna in Place
Technician:	M. Nowak
Date(s):	11/7/22 – 11/8/22
Temperature:	23.9 ºC
Relative Humidity:	40%
Detector:	Peak
Test Distance:	3m

Notes: The frequency range was scanned from 9kHz to 8.5 MHz
The emissions observed from the EUT do not exceed the limits specified.
*Noise floor measurement, minimum sensitivity of measurement system.
The limit shown for below 0.490 MHz is for a measurement distance of 300m.

Frequency	Antenna Pol / Height	EUT Orientation	Peak Meter Reading @ 3 M	Correction Factor	Distance Correction	Corrected Reading @ 30 M	Converted Reading	Limit @ 30m
MHz	(Parallel/Perpendicular/Horizontal)	Degrees	dBuV	dB	dB	dBuV/m	uV/m	uV/m
0.009								266.67
0.490								4.90
0.490								48.98
0.850	Parallel	187.1	56.8	11.7	-40.00	28.5	26.61	28.2
0.850	Perpendicular	183.6	57.0	11.7	-40.00	28.7	27.23	28.2
0.850	Horizontal	111.9	48.3	11.7	-40.00	20.0	10.00	28.2
1.700	Parallel	249.6	41.8	11.7	-40.00	13.5	4.74	14.12
1.700	Perpendicular	181.0	37.2	11.7	-40.00	8.9	2.79	14.12
1.700	Horizontal	121.5	33.3	11.7	-40.00	5.0	1.78	14.12
1.705								14.08
1.705								30
2.550	Parallel	121.8	28.4	11.8	-40.00	0.2	1.03	
2.550	Perpendicular	173.8	25.4	11.8	-40.00	-2.8	0.73	
2.550	Horizontal	104.5	22.2	11.8	-40.00	-6.0	0.51	
3.400	Parallel	253.0	31.8	11.8	-40.00	3.6	1.52	
3.400	Perpendicular	173.4	38.2	11.8	-40.00	10.0	3.17	
3.400	Horizontal	228.2	22.3	11.8	-40.00	-5.9	0.51	
4.250	Parallel	102.4	25.5	11.8	-40.00	-2.7	0.74	
4.250	Perpendicular	44.8	32.0	11.8	-40.00	3.8	1.55	
4.250	Horizontal	112.3	19.8	11.8	-40.00	-8.4	0.39	
5.100	Parallel	234.4	22.6	11.9	-40.00	-5.5	0.54	
5.100	Perpendicular	185.7	30.9	11.9	-40.00	2.8	1.39	
5.100	Horizontal	191.0	17.5	11.9	-40.00	-10.6	0.30	
								30

Frequency	Antenna Pol / Height	EUT Orientation	Peak Meter Reading @ 3 M	Correction Factor	Distance Correction	Corrected Reading @ 30 M	Converted Reading	Limit @ 30m
MHz	(Parallel/Perpendicular/Horizontal)	Degrees	dBuV	dB	dB	dBuV/m	uV/m	uV/m
5.950	Parallel	115.3	24.6	11.9	-40.00	-3.5	0.67	30
5.950	Perpendicular	95.7	26.3	11.9	-40.00	-1.8	0.82	|
*5.950	Horizontal	180.0	17.3	11.9	-40.00	-10.8	0.29	|
I								|
6.800	Parallel	199.1	26.6	11.9	-40.00	-1.5	0.85	|
6.800	Perpendicular	215.0	17.7	11.9	-40.00	-10.4	0.31	|
*6.800	Horizontal	180.0	15.8	11.9	-40.00	-12.3	0.25	|
I								|
7.650	Parallel	42.2	18.8	11.9	-40.00	-9.3	0.35	|
7.650	Perpendicular	153.2	17.7	11.9	-40.00	-10.4	0.31	|
*7.650	Horizontal	180.0	13.9	11.9	-40.00	-14.2	0.20	|
I								|
8.500	Parallel	95.6	13.9	11.9	-40.00	-14.2	0.2	|
8.500	Perpendicular	180.0	13.5	11.9	-40.00	-14.6	0.19	|
*8.500	Horizontal	180.0	12.5	11.9	-40.00	-15.6	0.17	|
I								|
8.50								30

EMISSIONS TEST DATA SHEET

Method:	FCC Part 15.209(a)
Job Number/Customer:	R-3578P-7 / Siemens Mobility
Test Sample:	IMU100 Tester
Model Number:	S25441-M3-A3-01.H (VCC); S25451-C401-B242 (Card File); S25447-H8-A2 (IMU 100); S25447-H80-A2-02 (Antenna)
Serial Number:	6101125087-001 (VCC); A2V00002744893 (Card File); 0225 (IMU 100)
Operating Mode:	VCC Transmitter Operating at 850 kHz, with IMU Antenna in Place
Technician:	M. Nowak
Date(s):	11/7/22 – 11/8/22
Temperature:	23.9 ºC
Relative Humidity:	40%
Detector:	Average
Test Distance:	3m

Notes: The frequency range was scanned from 9kHz to 8.5 MHz
The emissions observed from the EUT do not exceed the limits specified.
*Noise floor measurement, minimum sensitivity of measurement system.
The limit shown for below 0.490 MHz is for a measurement distance of 300m.

Frequency	Antenna Pol / Height	EUT Orientation	Avg. Meter Reading @ 3 M	Correction Factor	Distance Correction	Corrected Reading @ 30 M	Converted Reading	Limit @ 30m
MHz	(Parallel/Perpendicular/Horizontal)	Degrees	dBuV	dB	dB	dBuV/m	uV/m	uV/m
0.009								266.67
0.490								4.90
0.490								48.98
0.850	Parallel	187.1	42.6	11.7	-40.00	14.3	5.19	28.2
0.850	Perpendicular	183.6	45.8	11.7	-40.00	17.5	7.50	28.2
0.850	Horizontal	111.9	34.5	11.7	-40.00	6.2	2.05	28.2
1.700	Parallel	249.6	30.0	11.7	-40.00	1.7	1.22	14.12
1.700	Perpendicular	181.0	26.5	11.7	-40.00	-1.8	0.82	14.12
1.700	Horizontal	121.5	20.8	11.7	-40.00	-7.5	0.43	14.12
1.705								14.08
1.705								30
2.550	Parallel	121.8	17.5	11.8	-40.00	-10.7	0.3	
2.550	Perpendicular	173.8	11.9	11.8	-40.00	-16.3	0.16	
2.550	Horizontal	104.5	10.4	11.8	-40.00	-17.8	0.13	
3.400	Parallel	253.0	11.7	11.8	-40.00	-16.5	0.15	
3.400	Perpendicular	173.4	17.0	11.8	-40.00	-11.2	0.28	
3.400	Horizontal	228.2	10.0	11.8	-40.00	-18.2	0.13	
4.250	Parallel	102.4	13.5	11.8	-40.00	-14.7	0.19	
4.250	Perpendicular	44.8	13.8	11.8	-40.00	-14.4	0.20	
4.250	Horizontal	112.3	8.0	11.8	-40.00	-20.2	0.10	
5.100	Parallel	234.4	7.1	11.9	-40.00	-21.0	0.09	
5.100	Perpendicular	108.5	9.3	11.9	-40.00	-18.8	0.12	
5.100	Horizontal	191.0	6.5	11.9	-40.00	-21.6	0.09	
5.950	Parallel	115.3	5.2	11.9	-40.00	-22.9	0.08	
5.950	Perpendicular	95.7	7.8	11.9	-40.00	-20.3	0.10	
*5.950	Horizontal	180.0	4.5	11.9	-40.00	-23.6	0.07	30

Frequency	Antenna Pol / Height	EUT Orientation	Avg. Meter Reading @ 3 M	Correction Factor	Distance Correction	Corrected Reading @ 30 M	Converted Reading	Limit @ 30m
MHz	(Parallel/Perpendicular/Horizontal)	Degrees	dBuV	dB	dB	dBuV/m	uV/m	uV/m
								30
6.800	Parallel	199.1	11.0	11.9	-40.00	-17.1	0.14	
6.800	Perpendicular	215.0	6.4	11.9	-40.00	-21.7	0.09	
*6.800	Horizontal	180.0	6.0	11.9	-40.00	-22.1	0.08	
7.650	Parallel	42.2	5.6	11.9	-40.00	-22.5	0.08	
7.650	Perpendicular	153.2	5.5	11.9	-40.00	-22.6	0.08	
*7.650	Horizontal	180.0	2.5	11.9	-40.00	-25.6	0.06	
8.500	Parallel	95.6	2.8	11.9	-40.00	-25.3	0.06	
8.500	Perpendicular	193.1	2.1	11.9	-40.00	-26.0	0.06	
*8.500	Horizontal	180.0	0.1	11.9	-40.00	-28.0	0.04	
8.50								30