

Deere & Company / MA4R

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# RF Exposure Report

Project Number: 4724254 Proposal: SUW-202101000320

Report Number: 4724254EMC13 Revision Level: 2

Client: Deere & Company

Equipment Under Test: JDLink R Modem - 4G

Model Number: MA4R

FCC ID: OV5-MA4R

Applicable Standards: 47 C.F.R. §§ 2.1091 and 2.1093; FCC KDB 447498

**FCC OET Bulletin 65 Supplement** 

Report issued on: 12 May 2022

Test Result: Compliant





FOR THE SCOPE OF ACCREDITATION UNDER CERTIFICATE NUMBER: 3212.01
This report must not be used by the client to claim product certification, approval, or endorsement by A2LA, NIST, or any agency of the Federal

Government.

Prepared by:

Reviewed by:

David Schramm, Operations Manager

Remarks: This report details the results of the testing carried out on one sample; the results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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### 1 General Information

### 1.1 Client Information

Name: Deere & Company

Address: One John Deere Place

City, State, Zip, Country: Moline, IL 61265, USA

### 1.2 Test Laboratory

Name: SGS North America, Inc.

Address: 620 Old Peachtree Road NW, Suite 100

City, State, Zip, Country: Suwanee, GA 30024, USA

Accrediting Body: A2LA

Type of lab: Testing Laboratory

Certificate Number: 3212.01

#### 1.3 General Information of EUT

Product Description: JDLink R Modem - 4G

Model Number: MA4R

Serial Number: PCMA4MA200091

Modes of Operation: LTE Bands 2/4/5/7/12/13/26/38/41/66

WCDMA Bands II / IV / V

GSM 850 / 1900

802.11 a/b/g/nHT20/nHT40 BT GFSK/ Pi/4DQPSK/8DPSK/LE

Antenna Type: External Proprietary

IMEI: 004401083921102

Sample Received Date: 10 April 2021

Dates of testing: 08 May 2021 - 27 April 2022

## 1.4 Operating Modes and Conditions

For this assessment, the EUT's maximum power including the maximum tolerance was considered.

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# 2 RF Exposure

### 2.1 Test Result

Test Description	Product Specific Standard	Test Result		
RF Exposure	FCC Part 1.1310	Compliant		

### 2.2 Test Method

Using the maximum power (including tune-up tolerances), the power density was calculated. Maximum antenna gain was assumed for this exercise.

# 2.3 Single transmission RF Exposure Levels

Band of Operation		Conducted Power w/tolerance	Antenna Gain	Cable Loss	Averag	e EIRP	Distance (R)	Power Density EIRP <sub>Avg</sub> /(4πR²)	FCC	% of Limit	Verdict
Туре	MHz	dBm			dBm	mW	cm	mW/cm²	mW/cm <sup>2</sup>		
LTE Band 2	1850-1910	25.0	-0.1	0.0	24.9	309	20	0.061	1.00	6.15%	Pass
LTE Band 4	1710-1755	25.0	0.7	0.0	25.7	372	20	0.074	1.00	7.4%	Pass
LTE Band 5	824-849	25.0	-0.3	0.0	24.7	295	20	0.059	0.55	10.69%	Pass
LTE Band 7	2500-2570	25.0	2.4	0.0	27.4	551	20	0.110	1.00	10.96%	Pass
LTE Band 12	699-716	25.0	-0.2	0.0	24.8	302	20	0.060	0.47	12.89%	Pass
LTE Band 13	777-787	25.0	-0.2	0.0	24.8	302	20	0.060	0.52	11.60%	Pass
LTE Band 26	814-849	25.0	3.5	0.0	28.5	708	20	0.141	0.54	25.95%	Pass
LTE Band 38	2570-2620	25.0	3.5	0.0	28.5	708	20	0.141	1.00	14.08%	Pass
LTE Band 41	2496-2620	25.0	3.5	0.0	28.5	708	20	0.141	1.00	14.08%	Pass
LTE Band 66	1710–1780	25.0	0.7	0.0	25.7	372	20	0.074	1.00	7.39%	Pass
WCDMA Band II	1850-1910	24.0	-0.1	0.0	23.9	245	20	0.049	1.00	4.88%	Pass
WCDMA Band IV	1710-1755	24.0	0.7	0.0	24.7	295	20	0.059	1.00	5.87%	Pass
WCDMA Band V	824-849	24.0	-0.3	0.0	23.7	237	20	0.047	0.55	8.57%	Pass
GSM 850	824-849	27.6	-0.3	0.0	27.3	542	20	0.108	0.55	19.63%	Pass
GSM 1900	1850-1910	24.6	-0.1	0.0	24.5	282	20	0.056	1.00	5.61%	Pass
WLAN 2.4	2400-2483.5	17.8	-0.4	0.0	17.4	54	20	0.011	1.00	1.08%	Pass
Bluetooth	2400-2483.5	10.0	-0.4	0.0	9.6	9	20	0.002	1.00	0.18%	Pass
Bluetooth LE	2400-2483.5	5.4	-0.4	0.0	5.0	3	20	0.001	1.00	0.06%	Pass

## 2.4 Simultaneous transmission RF Exposure Levels

	WLAN 2.4	Bluetooth	Bluetooth LE
LTE Band 2	7.2%	6.3%	6.2%
LTE Band 4	8.5%	7.6%	7.5%
LTE Band 5	11.8%	10.9%	10.8%
LTE Band 7	12.0%	11.1%	11.0%
LTE Band 12	14.0%	13.1%	13.0%
LTE Band 13	12.7%	11.8%	11.7%
LTE Band 26	27.0%	26.1%	26.0%
LTE Band 38	15.2%	14.3%	14.1%
LTE Band 41	15.2%	14.3%	14.1%
LTE Band 66	8.5%	7.6%	7.5%
WCDMA Band II	6.0%	5.1%	4.9%
WCDMA Band IV	7.0%	6.1%	5.9%
WCDMA Band V	9.7%	8.7%	8.6%
GSM 850	20.7%	19.8%	19.7%
GSM 1900	6.7%	5.8%	5.7%
WLAN 2.4	-	1.3%	1.1%
Bluetooth	1.3%		
Bluetooth LE	1.1%		

Note: Highlighted value only indicates worst-case.

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# 3 Revision History

Revision Level	Description of changes	Revision Date
0	Initial release	25 August 2021
1	- Updated product marketing name throughout report	12 January 2022
2	<ul> <li>Added LTE Bands 26 and 66 and Bluetooth LE to the RF exposure calculations</li> <li>Corrected antenna gain values</li> </ul>	10 May 2022

SGS North America Inc.