

# RF Exposure Report

**Project Number:** 5025746

**Offer Number:** SUW-202210003579

**Report Number:** 5025746EMC04

**Report Revision:** 1

**Client:** Deere & Company

**Equipment Under Test:** JDLINK™ R Modem - 4G with 18' LMR 240 UF Cable & MCR Whip Antenna

**Model:** MA4R

**FCC ID:** OV5-MA4R

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

FCC KDB 447498 D01 General RF Exposure Guidance v06

**Report Revision on:** 07 July 2023


**Result:** Compliant



FOR THE SCOPE OF ACCREDITATION UNDER CERTIFICATE NUMBER: 3212.01

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.

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## 1 General Information

### 1.1 Client Information

Name: Deere & Company dba John Deere Intelligent Solutions Group  
Address: 9505 Northpark Dr.  
City, State, Zip, Country: Urbandale, IA 50131 USA

### 1.1 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

### 1.2 General Information of EUT

Manufacturer Name: Deere & Company  
Address: One John Deere Place  
City, State, Zip, Country: Moline, IL 61265

Product Marketing Name (PMN): JDLink™R Modem - 4G  
Model Number (HVIN): MA4R  
Serial Number: PCMA4RA200091

Module FCC ID: OV5-MA4R  
Module Frequency Range: 2402 – 2480 MHz  
Wi-Fi 802.11 b/g/nHT20/nHT40  
Module Modulation: BT GFSK/ Pi/4DQPSK/8DPSK/  
BLE 1M

Module Antenna Type: MCR Whip Antenna  
Module Antenna Gain: 5 dBi

Rated Voltage: 9 – 32Vdc  
Test Voltage: 12 VDC

Sample Received Date: 23 March 2023  
Dates of testing: 27 March 2023 – 08 May 2023

## 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.

Band of Operation		Conducted Power w/tolerance dBm	Antenna Gain	Cable Loss	Average EIRP		Distance (R) cm	Power Density EIRP <sub>Avg</sub> /(4πR <sup>2</sup> ) mW/cm <sup>2</sup>	FCC mW/cm <sup>2</sup>	% of Limit	Verdict
Type	MHz				dBm	mW					
LTE Band 2	1850-1910	25.0	-0.1	0.0	24.9	309	20	0.061	1.00	6%	Pass
LTE Band 4	1710-1755	25.0	0.7	0.0	25.7	372	20	0.074	1.00	7%	Pass
LTE Band 5	824-849	25.0	-0.3	0.0	24.7	295	20	0.059	0.55	11%	Pass
LTE Band 7	2500-2570	25.0	2.4	0.0	27.4	551	20	0.110	1.00	11%	Pass
LTE Band 12	699-716	25.0	-0.2	0.0	24.8	302	20	0.060	0.47	13%	Pass
LTE Band 13	777-787	25.0	-0.2	0.0	24.8	302	20	0.060	0.52	12%	Pass
LTE Band 26	814-849	25.0	3.5	0.0	28.5	708	20	0.141	0.54	26%	Pass
LTE Band 38	2570-2620	25.0	3.5	0.0	28.5	708	20	0.141	1.00	14%	Pass
LTE Band 41	2496-2620	25.0	3.5	0.0	28.5	708	20	0.141	1.00	14%	Pass
LTE Band 66	1710-1780	25.0	0.7	0.0	25.7	372	20	0.074	1.00	7%	Pass
WCDMA Band II	1850-1910	24.0	-0.1	0.0	23.9	245	20	0.049	1.00	5%	Pass
WCDMA Band IV	1710-1755	24.0	0.7	0.0	24.7	295	20	0.059	1.00	6%	Pass
WCDMA Band V	824-849	24.0	-0.3	0.0	23.7	237	20	0.047	0.55	9%	Pass
GSM 850	824-849	27.6	-0.3	0.0	27.3	542	20	0.108	0.55	20%	Pass
GSM 1900	1850-1910	24.6	-0.1	0.0	24.5	282	20	0.056	1.00	6%	Pass
WLAN 2.4	2400-2483.5	15.1	5.0	0.0	20.1	103	20	0.020	1.00	2.04%	Pass
Bluetooth	2400-2483.5	6.5	5.0	0.0	11.5	14	20	0.003	1.00	0.28%	Pass
Bluetooth LE	2400-2483.5	1.2	5.0	0.0	6.2	4	20	0.001	1.00	0.08%	Pass

### 2.3 Single transmission RF Exposure Levels (mW/cm<sup>2</sup>)

Simultaneous transmission RF Exposure Levels (mW/cm<sup>2</sup>)

	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	--	2.2%	2.1%
Bluetooth	1.4%	--	--
Bluetooth LE	1.1%	--	--

### 3 Revision History

Revision Level	Description of changes	Revision Date
0	Initial release	20 June 2023
1	Updated sections 1.1, 1.2, 1.3, 2.2	07 July 2023