

# RF Exposure Report

**Project Number:** 4219718

**Report Number:** 4219718EMC05

**Revision Level:** 0

**Client:** Johnson Controls Inc

**Equipment Under Test:** Wireless Thermostat

**Model:** SiO2

**FCC ID:** OEJGLASWIFI

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

**FCC OET Bulletin 65 Supplement**

**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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## TABLE OF CONTENTS

<b>1</b>	<b>GENERAL INFORMATION.....</b>	<b>3</b>
1.1	CLIENT INFORMATION.....	3
1.2	TEST LABORATORY .....	3
1.3	GENERAL INFORMATION OF EUT.....	3
1.4	OPERATING MODES AND CONDITIONS .....	3
<b>2</b>	<b>RF EXPOSURE.....</b>	<b>4</b>
2.1	TEST RESULT.....	4
2.2	TEST METHOD.....	4
2.3	SINGLE TRANSMISSION RF EXPOSURE LEVELS.....	4
2.4	SIMULTANEOUS TRANSMISSION RF EXPOSURE LEVELS .....	4

## 1 General Information

### 1.1 Client Information

Name: Johnson Controls Inc  
Address: 507 East Michigan Street  
City, State, Zip, Country: Milwaukee, WI 53202, 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

Type of Product: Wireless Thermostat  
Model Number: SiO2  
Serial Number: 173800048

Frequency Ranges: 2412-2462MHz (WLAN), 2402 – 2480MHz (BT/BLE)  
Data Modes (2.4GHz): 802.11b, 802.11g, 802.11n (HT20), Bluetooth LE, Bluetooth Classic  
(Basic Rate, EDR-2, EDR-3)

Antenna: Internal, 3.34 dBi Max Gain

Rated Voltage: 24Vac, 60Hz  
Test Voltage: 24Vac, 60Hz

Sample Received Date: 18 October 2017  
Dates of testing: 18 - 31 October 2017

### 1.4 Operating Modes and Conditions

For this assessment, the EUT's maximum measured conducted power was considered.

## 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 measured conducted power and provided directional antenna gains, the power density was calculated.

### 2.3 Single transmission RF Exposure Levels

Band of Operation		Conducted Power w/tolerance dBm	Antenna Gain	Cable Loss	Average EIRP		Distance (R) cm	Power Density $EIRP_{avg}/(4\pi R^2)$ mW/cm <sup>2</sup>	FCC mW/cm <sup>2</sup>	% of Limit	Verdict
Type	MHz				dBm	mW					
WLAN 2.4	2400-2483.5	23.3	3.3	0.0	26.6	461	20	0.092	1.00	9%	Pass
Bluetooth LE	2400-2483.5	4.0	3.3	0.0	7.3	5	20	0.001	1.00	0%	Pass
Bluetooth Classic	2400-2483.5	13.2	3.3	0.0	16.5	45	20	0.009	1.00	1%	Pass

### 2.4 Simultaneous transmission RF Exposure Levels

	WLAN 2.4	Bluetooth LE	Bluetooth Classic
WLAN 2.4		9%	10%
Bluetooth LE	9%		
Bluetooth Classic	10%		

Expressed as a percentage of the limit. Color is only used to identify worst-case.