

RF Exposure Report

Project Number: 4278564

Report Number: 4278564EMC06

Client: Air Innovation

Equipment Under Test: Wine Cellar Climate Control System

Model Name: Wine Guardian International System (HVAC/Remote System)

Model Number: Main Board Radio 39H0043/FG013580

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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1 General Information

1.1 Client Information

Name: Air Innovations
Address: 7000 Performance Drive
City, State, Zip, Country: North Syracuse, NY 13212 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

Type of Product: Wine Cellar Climate Control System
Model Name: Wine Garden International System (HVAC/Remote System)
Tested Model Number: Main Board Radio 39H0043/FG013580
Equivalent Modules: RUI 39H0044/FG13578
LUI 39H0045/FG014220
Remote T/RH Sensor 39H0046/FG13579
RUI 39H0044/FG13578

Frequency Range: 2402-2480MHz
Modulation: Bluetooth Low Energy
Antenna: Internal PCB Trace (-11.0 dBi gain)

Rated Voltage: 9VDC Battery Power
Test Voltage: 9VDC Battery Power

Type of Product: Wine Cellar Climate Control System

1.3 Operating Modes and Conditions

For transmitter tests, the EUT was configured with software to allow the EUT to be manually placed in continuous transmit on any channel (Low to High, 2402-2480MHz) and its normal modulation or data rate.

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

2.3 Single transmission RF Exposure Levels (mW/cm²)

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 ²	FCC mW/cm ²	% of Limit	Verdict
Type	MHz				dBm	mW					
Bluetooth	2400-2483.5	8.6	-11.0	0.0	-2.4	1	20	0.000	1.00	0%	Pass

Due to its extremely low output power level of -2.4 dBm (r.m.s.) EIRP (8.6 dBm + (-11 dBi) = -2.4 dBm EIRP or 0.562 mW EIRP), it is well below the Power Density $EIRP_{Avg}/(4\pi R^2)$ mW/cm² limit.