



RF EXPOSURE EVALUATION REPORT

FCC ID : 2AWL7-AC01WF
Equipment : Motion sensor
Brand Name : Abilliant Care; BestShape Care
Model Name : AC01WF
Applicant : WISTRON MEDICAL TECHNOLOGY CORPORATION
5F., NO.5, XIN-AN RD., SCIENCE-BASED INDUSTRIAL PARK,
HSINCHU CITY 30076, TAIWAN, R.O.C.
Manufacturer : WISTRON MEDICAL TECHNOLOGY CORPORATION
5F., NO.5, XIN-AN RD., SCIENCE-BASED INDUSTRIAL PARK,
HSINCHU CITY 30076, TAIWAN, R.O.C.
Standard : 47 CFR Part 2.1091

We, SPORTON INTERNATIONAL INC has been evaluated this product in accordance with 47 CFR Part 2.1091 and it complies with applicable limit.

The results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 1190) and the FCC designation No. TW1190 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC evaluation.

Approved by: Cona Huang / Deputy Manager

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History of this test report

Report No.	Version	Description	Issued Date
FA022715	Rev. 01	Initial issue of report	Dec. 15, 2020



1. Description of Equipment Under Test (EUT)

Product Feature & Specification	
EUT Type	Motion sensor
Brand Name	Abilliant Care; BestShape Care
Model Name	AC01WF
FCC ID	2AWL7-AC01WF
Wireless Technology and Frequency Range	WLAN 2.4GHz Band: 2400 MHz ~ 2483.5 MHz 24GHz Radar: 24092 MHz ~ 24160 MHz
Mode	WLAN: 802.11b/g/n HT20/HT40 24GHz Radar: CW
HW Version	24GHz board: SD; Main board: SC; MCU board:
SW Version	Main board: 011; MCU board:M41T2R06_L452
EUT Stage	Production Unit

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

Reviewed by: Jason Wang

Report Producer: Daisy Peng



2. Maximum RF average output power among production units

Mode		Maximum Average Power (dBm)
2.4GHz WLAN	802.11b	15.20
	802.11g	11.30
	802.11n-HT20	10.60
	802.11n-HT40	10.00

Mode	EIRP Output Power (dBm)
24GHz Radar	-19.33



3. RF Exposure Limit Introduction

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f ²)	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$S = \frac{PG}{4\pi R^2}$$

Where:

S = Power Density

P = Output Power at Antenna Terminals

G = Gain of Transmit Antenna (linear gain)

R = Distance from Transmitting Antenna



4. Radio Frequency Radiation Exposure Evaluation

4.1. Standalone Power Density Calculation

Band	Antenna Gain (dBi)	Maximum Power (dBm)	Maximum EIRP (dBm)	Maximum EIRP (W)	Average EIRP (mW)	Power Density at 20cm (mW/cm ²)	Limit (mW/cm ²)	Power Density / Limit
2.4GHz WLAN	2.54	15.20	17.740	0.059	59.429	0.012	1.000	0.011829
24GHz Radar			-19.330	0.000	0.012	0.000	1.000	0.000002

WLAN Power Density / Limit	24GHz Radar Power Density / Limit	Σ (Power Density / Limit) of WLAN+24GHz Radar
0.011829	0.000002	0.011831

Note:

1. Σ (Power Density / Limit): This is a summation of [(power density for each transmitter/antenna included in the simultaneous transmission)/ (corresponding MPE limit)], for WLAN + 24GHz Radar.
2. Considering the WLAN with the 24GHz Radar of the EIRP performance listed in the table above, the aggregated (power density /limit) is smaller than 1, and MPE of 2 collocated transmitters is compliant

Conclusion:

According to 47 CFR §2.1091, the RF exposure analysis concludes that the RF Exposure is FCC compliant.