



RF Exposure Evaluation Declaration

Product Name : basicDIM Wireless Sensor
Model No. : basicDIM Wireless Sensor 5DP 38rc US
FCC ID : 2AMXZ-0004

Applicant : Tridonic GmbH&Co KG
Address : Färbergasse 15 6851 Dornbirn Austria

Date of Receipt : Feb. 22, 2019
Test Date : Feb. 23, 2019~ Mar. 15, 2019
Issued Date : Mar. 28, 2019
Report No. : 1922064R-RF-US-P20V01
Report Version : V1.0

The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by A2LA or any agency of the government.

The test report shall not be reproduced without the written approval of DEKRA Testing and Certification (Suzhou) Co., Ltd.

Test Report Certification

Issued Date : Mar. 28, 2019

Report No. : 1922064R-RF-US-P20V01



Product Name : basicDIM Wireless Sensor

Applicant : Tridonic GmbH&Co KG

Address : Färbergasse 15 6851 Dornbirn Austria

Manufacturer : Hytronik Electronics Co., LTD.

Address : 3rd Floor, block C, complex building, 155#, Bai'gang road south,
Xiao Jin Kou town, Huicheng district, Huizhou, Guangdong, china
Guangdong, china south, Xiao Jin Kou town, Huicheng district,
Huizhou,
Guangdong, china

Model No. : basicDIM Wireless Sensor 5DP 38rc US

FCC ID : 2AMXZ-0004

EUT Voltage : 120-277VAC 50/60Hz Max.0.01A

Test Voltage : AC 120V/60Hz

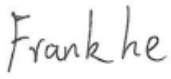
Brand Name : TRIDONIC

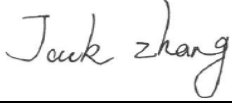
Applicable Standard : KDB 447498D01V06
FCC Part1.1310

Test Result : Complied

Performed Location : DEKRA Testing and Certification (Suzhou) Co., Ltd.
No.99 Hongye Rd., Suzhou Industrial Park, Suzhou, 215006,
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Approved By : 
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1. RF Exposure Evaluation

1.1. Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	F/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	F/1500	6
1500-100,000	--	--	1	30

F= Frequency in MHz

Friis Formula

Friis transmission formula: $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

R = distance between observation point and center of the radiator in cm

P_d is the limit of MPE, 1 mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

1.2. Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

The temperature and related humidity: 18°C and 78% RH.

1.3. Test Result of RF Exposure Evaluation

Product	:	basicDIM Wireless Sensor
Test Item	:	RF Exposure Evaluation
Test Site	:	AC-6

Antenna Information:

Model No.		N/A								
Antenna manufacturer		N/A								
Antenna Delivery		☒	1*TX+1*RX		☐	2*TX+2*RX		☐	3*TX+3*RX	
Antenna technology		☒	SISO							
		☐	MIMO	☐	Basic					
				☐	CDD					
				☐	Sectorized					
				☐	Beam-forming					
Antenna Type		☐	External	☐	Dipole					
				☐	Sectorized					
		☒	Internal	☐	PIFA					
				☒	PCB					
				☐	Ceramic Chip Antenna					
				☐	Dipole Antenna					
Antenna Technology		Ant Gain (dBi)								
☒	SISO	0								

- Output Power into Antenna & RF Exposure Evaluation Distance
- Standalone modes

Test Mode	Frequency Band (MHz)	Maximum Output Power to Antenna (dBm)	Directional Gain (dBi)	Power Density at R = 20 cm (mW/cm ²)	Power Density Limit at R = 20 cm (mW/cm ²)
BLE	2400 ~ 2483.5	2.36	0	0.1078	1.0

Note: The simultaneous transmission power density is 0.1078mW/cm² for basicDIM Wireless Sensor without any other radio equipment.

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