

RF Exposure Report

Report No.: SA190429C10

FCC ID: M82-WISE2210

Test Model: WISE-2210

Series Model: WISE-2211

Received Date: Apr. 30, 2019

Test Date: Jun. 07 ~ Jun. 26, 2019

Issued Date: Jun. 28, 2019

Applicant: ADVANTECH CO., LTD

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Release Control Record

Issue No.	Description	Date Issued
SA190429C10	Original release	Jun. 28, 2019

1 Certificate of Conformity

Product: IoT Wireless Sensor Node

Brand: Advantech

Test Model: WISE-2210

Series Model: WISE-2211

Applicant: ADVANTECH CO., LTD

Test Date: Jun. 07 ~ Jun. 26, 2019

Standards: FCC Part 2 (Section 2.1091)

KDB 447498 D01 General RF Exposure Guidance v06

IEEE C95.3 -2002

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

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Approved by : Bruce Chen , **Date:** Jun. 28, 2019
Bruce Chen / Senior Project Engineer

2 RF Exposure

2.1 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)
Limits For General Population / Uncontrolled Exposure				
300-1500	...	...	F/1500	30
1500-100,000	...	...	1.0	30

F = Frequency in MHz

2.2 MPE Calculation Formula

$$P_d = (P_{out} * G) / (4 * \pi * r^2)$$

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

2.3 Classification

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as Mobile Device.

3 Calculation Result of Maximum Conducted Power

Electric field (dBuV/m) @3m	Electric field (dBuV/m) @0.2m	EIRP Power (dBm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
93.8	117.32	-1.431	0.00014	0.601

Note: $93.8 + 20 \log(3/0.2) = 117.32 \text{ dBuV/m}$

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