



RF Exposure evaluation

Applicant : Shenzhen Dazhi Technology Co., Ltd.
Floor 3 & 4, Building F, Huangpu Runhe Industrial Park, No.1Zhentou
Address : Road, Shajing Street, Bao'an District, Shenzhen City, Guangdong
Province
Manufacturer : Shenzhen Dazhi Technology Co., Ltd.
Floor 3 & 4, Building F, Huangpu Runhe Industrial Park, No.1Zhentou
Address : Road, Shajing Street, Bao'an District, Shenzhen City, Guangdong
Province
Product Name : Smart Plug-In Aroma Diffuser
Model Number : WD200, MAD-01S
Test Model : WD200
Trademark : N/A
FCC ID : 2BSFY- WD200
Test Date : June 10, 2026 - June 23, 2026
Date of Report : June 24, 2026
Test Result : This device described above has been tested by BKC, and the test results show that the equipment under test (EUT) is in compliance with the FCC 47CFR § 2.1091 and KDB 447498 D01 General RF Exposure Guidance v06 requirements. And it is applicable only to the tested sample identified in the report.

Test Procedure Used:

Standards : FCC 47CFR § 2.1091
KDB 447498 D01 General RF Exposure Guidance v06

Prepared by(Test Engineer):
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Reviewer(Supervisor):
Casey Wang

Approved(Manager):
Jerry Liao





1. General Information

1.1. Description of Device (EUT)

EUT Name	: Smart Plug-In Aroma Diffuser
Model No.	: WD200, MAD-01S
Model Difference	: Only the model name differs, but all other aspects are the same. The main tested model is WD200
Power supply	: Input: AC 100-240V, 50/60Hz, 30mA
Operation frequency	: 2412MHz-2462MHz
Max. RF output power:	: 10.98 dBm
Modulation	: 802.11b: Direct Sequence Spread Spectrum(DSSS) 802.11g/802.11n(H20) Orthogonal Frequency Division Multiplexing(OFDM)
Antenna Type	: PCB antenna, Maximum Gain is 2.45dBi
Intend use environment	: Residential, commercial and light industrial environment
Testing sample ID	: BKC26063171FE-1# (Engineer sample) BKC26063171FE-2# (Normal sample)

1.2. Test Facility

Site Description	
Name of Firm	: Shenzhen BKC Testing Co., Ltd.
Site Location	: Room 103, 1/F, Huaya Building, Huaya Industrial Park, Longhua Community, Longhua District, Shenzhen, Guangdong, China.
ISED CAB identifier	: CN0188
ISED Company Number	: 34333
FCC Designation Number	: CN1416
FCC Test Firm Registration Number	: 701543

2. RF Exposure Evaluation

According to KDB 447498 D01 General RF Exposure Guidance v06 and part 2.1091, Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Test Exclusion Threshold condition(s), listed below, is (are) satisfied.

Limits

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)	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

f = frequency in MHz

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

Where

Pd = power density in mW/cm², **Pout** = output power to antenna in mW;

G = gain of antenna in linear scale, **Pi** = 3.1416;

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

Pd 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.

Test Procedure

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

Test Result of RF Exposure Evaluation

Manufacturing tolerance

Mode	Max Conducted Output Power (dBm)	tune-up	Max. tune-up
2.4GWIFI	10.98	11±1	12

2.4GWiFi mode

FCC RF Exposure Evaluation

Antenna Gain (dBi)	Antenna Gain (numeric)	Max conducted power (dBm)	Output power to antenna (mW)	Power Density at R=20cm (mW/cm ²)	Limit (mW/cm ²)	Result
2.45	1.76	12	27.896	0.00555	1	PASS

Remark: 2.4G WIFI antenna gain=2.45 dBi

