

# RF Exposure Evaluation Report

**Report No.:** 2605W77307EC

**Applicant:** Whirlpool Microwave Products Development Limited.

**Address:** 17th Fl, Elite Centre, 22 Hung To Rd, Kwun Tong, Hong Kong

**Product Name:** Household microwave oven

**Product Model:** YKMML550

**Multiple Models:** N/A

**Trade Mark:** Whirlpool

**FCC ID:** PR4TANGO2SLPY

**Standards:** 47 CFR §1.1310

KDB 447498 D01 General RF Exposure Guidance v06

**Test Date:** 2026-09-07

**Test Result:** Complied

**Report Date:** 2026-09-11

**Reviewed by:**

*Luke Li*

**Approved by:**

*Jacob Kong*

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Project Engineer

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**Prepared by:**

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## Revision History

| Version No. | Issued Date | Description |
|-------------|-------------|-------------|
| 00          | 2026-09-11  | Original    |

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# 1 General Information

## 1.1 Client Information

|               |                                                          |
|---------------|----------------------------------------------------------|
| Applicant:    | Whirlpool Microwave Products Development Limited.        |
| Address:      | 17th Fl, Elite Centre,22 Hung To Rd,Kwun Tong, Hong Kong |
| Manufacturer: | Whirlpool Microwave Products Development Limited.        |
| Address:      | 17th Fl, Elite Centre,22 Hung To Rd,Kwun Tong, Hong Kong |

## 1.2 Product Description of EUT

The EUT is Household microwave oven operate on 2450MHz ISM frequency Band.

|                                           |                                        |
|-------------------------------------------|----------------------------------------|
| Sample Serial Number                      | 3SMC-1(assigned by WATC)               |
| Sample Received Date                      | 2026-09-07                             |
| Sample Status                             | Good Condition                         |
| Operating Frequency Range                 | 2450MHz±50.0 MHz                       |
| Power Supply                              | AC 120V/60Hz                           |
| Microwave Rated Input Power <sup>#</sup>  | 1500W                                  |
| Microwave Rated Output Power <sup>#</sup> | 900W                                   |
| Modification                              | Sample No Modification by the test lab |

## 1.3 Laboratory Location

World Alliance Testing & Certification (Shenzhen) Co., Ltd

No. 1002, East Block, Laobing Building, Xingye Road 3012, Xixiang street, Bao'an District, Shenzhen, Guangdong, People's Republic of China

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The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 463912, the FCC Designation No. : CN5040.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0160.

## 2 RF Exposure Evaluation

### 2.1 Standard

According to §1.1310, radio frequency devices shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

Table 1 to § 1.1310(e)(1)—Limits for Maximum Permissible Exposure (MPE)

| Frequency range (MHz)                                           | Electric field strength (V/m) | Magnetic field strength (A/m) | Power density (mW/cm <sup>2</sup> ) | Averaging time (minutes) |
|-----------------------------------------------------------------|-------------------------------|-------------------------------|-------------------------------------|--------------------------|
| <b>(i) Limits for Occupational/Controlled Exposure</b>          |                               |                               |                                     |                          |
| 0.3–3.0                                                         | 614                           | 1.63                          | *(100)                              | ≤6                       |
| 3.0–30                                                          | 1842/f                        | 4.89/f                        | *(900/f <sup>2</sup> )              | <6                       |
| 30–300                                                          | 61.4                          | 0.163                         | 1.0                                 | <6                       |
| 300–1,500                                                       |                               |                               | f/300                               | <6                       |
| 1,500–100,000                                                   |                               |                               | 5                                   | <6                       |
| <b>(ii) Limits for General Population/Uncontrolled Exposure</b> |                               |                               |                                     |                          |
| 0.3–1.34                                                        | 614                           | 1.63                          | *(100)                              | <30                      |
| 1.34–30                                                         | 824/f                         | 2.19/f                        | *(180/f <sup>2</sup> )              | <30                      |
| 30–300                                                          | 27.5                          | 0.073                         | 0.2                                 | <30                      |
| 300–1,500                                                       |                               |                               | f/1500                              | <30                      |
| 1,500–100,000                                                   |                               |                               | 1.0                                 | <30                      |

f = frequency in MHz. \* = Plane-wave equivalent power density.

#### Calculation formula:

Prediction of power density at the distance of the applicable MPE limit

$S = PG/4\pi R^2$  = power density (in appropriate units, e.g. mW/cm<sup>2</sup>);

P = power input to the antenna (in appropriate units, e.g., mW);

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain;

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm);

For simultaneously transmit system, the calculated power density should comply with:

$$\sum_i \frac{S_i}{S_{Limit,i}} \leq 1$$

## 2.2 Result

|                               |                                                                    |                 |            |
|-------------------------------|--------------------------------------------------------------------|-----------------|------------|
| <b>Test Date:</b>             | 2026-09-07                                                         | <b>Test By:</b> | Ryan Zhang |
| <b>Environment condition:</b> | Temperature: 25.1°C; Relative Humidity:64%; ATM Pressure: 101.2kPa |                 |            |

### For microwave oven:

- Measurement Method:

FCC OST MP-5-1986 Section 3.1

- Measurement Equipment:

| Manufacturer | Description            | Model | Management No. | Calibration Date | Calibration Due Date |
|--------------|------------------------|-------|----------------|------------------|----------------------|
| ETS          | Microwave Survey Meter | 1501  | 3640274        | 2024/10/11       | 2027/10/10           |

- Test data:

Radiation leakage was measured in the as-received condition with the oven door closed using a microwave leakage meter.

A 275mL water load was placed in the center of the oven and the oven was operated at maximum output power.

There was no microwave leakage exceeding a power level of **0.1**mW/cm<sup>2</sup> observed at any point 5 cm or more from the external surface of the oven.

A maximum of 1.0mW/cm<sup>2</sup> is allowed in accordance with the applicable Federal Standards. Hence, microwave leakage in the as-received condition with the oven door closed was below the maximum allowed.

### For Wi-Fi module:

| Radio     | Frequency (MHz) | Maximum Conducted Power including Tune-up Tolerance |        | Antenna Gain |           | Min. test separation distance (cm) | Power Density (mW/cm <sup>2</sup> ) | MPE Limit (mW/cm <sup>2</sup> ) | Verdict |
|-----------|-----------------|-----------------------------------------------------|--------|--------------|-----------|------------------------------------|-------------------------------------|---------------------------------|---------|
|           |                 | (dBm)                                               | (mW)   | (dBi)        | (numeric) |                                    |                                     |                                 |         |
| 2.4G WLAN | 2412-2462       | 22.0                                                | 158.49 | 4.2          | 2.63      | 20                                 | 0.0829                              | 1.0                             | Pass    |
| BT        | 2402-2480       | 3.0                                                 | 2.0    | 4.2          | 2.63      | 20                                 | 0.0010                              | 1.0                             | Pass    |
| BLE       | 2402-2480       | 0                                                   | 1.0    | 4.2          | 2.63      | 20                                 | 0.0005                              | 1.0                             | Pass    |

*Note: The device contains a certified Wi-Fi module(Model: RIGEL, FCC ID: 2AC7Z-RIGEL), the Maximum Conducted Power including Tune-up Tolerance and Antenna Gain in above table was refer from the module report.*

**Simultaneously transmit Consideration:**

Microwave Oven + *Wi-Fi module*

The ratio= $0.0829/1.0+0.1/1.0=0.1829<1$

**Result: Complied.**

**---End of Report---**