

QLWAHK CH85/CH86 1.2uF 2100V

QLWAHK CH85/CH86 High Voltage Capacitor Instruction Manual

Model: CH85/CH86 1.2uF 2100V

1. INTRODUCTION

This manual provides essential information for the safe and proper handling, installation, and maintenance of the QLWAHK CH85/CH86 High Voltage Capacitor. This capacitor is specifically designed for use in industrial microwave oven applications, where it plays a critical role in the high-voltage power supply circuit.

Please read this manual thoroughly before attempting any installation or service to ensure personal safety and optimal product performance.

2. SAFETY INFORMATION

WARNING: HIGH VOLTAGE. RISK OF SEVERE INJURY OR DEATH.

High voltage capacitors store significant electrical energy even after power is disconnected. Improper handling can result in severe electric shock, burns, or other serious injuries. Adhere strictly to the following safety precautions:

- **Professional Installation Required:** Installation and servicing of this component must only be performed by qualified and certified technicians with experience in high-voltage electrical systems and microwave oven repair.
- **Disconnect Power:** Always ensure the microwave oven is completely disconnected from its power source before beginning any work.
- **Discharge Capacitor:** Before touching any part of the high-voltage circuit, including the capacitor, it is imperative to safely discharge the capacitor using an appropriate high-voltage discharge tool. Wait several minutes after discharge before handling.
- **Insulation:** Use insulated tools and wear appropriate personal protective equipment (PPE), including high-voltage insulated gloves and safety glasses.
- **Avoid Contact:** Do not touch the capacitor terminals or body with bare hands or uninsulated tools.
- **Check for Damage:** Inspect the capacitor for any signs of physical damage, leaks, or bulging before installation. Do not install a damaged capacitor.

3. PRODUCT OVERVIEW

The QLWAHK CH85/CH86 is a high-quality, high-voltage capacitor designed for reliable performance in industrial microwave oven applications. It features a robust construction suitable for demanding environments.



Figure 1: QLWAHK CH85/CH86 High Voltage Capacitor. This image displays the cylindrical form factor of the capacitor, featuring two insulated terminals at the top for electrical connections. The side label indicates specifications such as voltage, capacitance, and manufacturing details.

Key Features:

- Designed for industrial microwave oven high-voltage circuits.
- Rated for 2100V AC operation.
- 1.20µF capacitance with $\pm 3\%$ tolerance.
- Equipped with 3+3 6.3MM 3PIN terminals for secure connections.
- Includes an internal discharge resistor (10MΩ) for enhanced safety.

4. INSTALLATION (SETUP)

IMPORTANT: Ensure all safety precautions in Section 2 are strictly followed before proceeding.

1. **Power Disconnection:** Completely unplug the microwave oven from the wall outlet.
2. **Access Panel Removal:** Carefully remove the outer casing or access panel of the microwave oven to expose the high-voltage components.
3. **Capacitor Discharge:** Locate the existing high-voltage capacitor. Using a high-voltage discharge tool, safely discharge the capacitor. Confirm discharge with a voltmeter.
4. **Disconnect Old Capacitor:** Once discharged, carefully disconnect the wires from the terminals of the old capacitor. Note the orientation and connections for proper reinstallation.
5. **Remove Old Capacitor:** Unmount the old capacitor from its bracket or mounting points.
6. **Install New Capacitor:** Mount the QLWAHK CH85/CH86 capacitor securely in the same location. Ensure it is firmly fastened to prevent vibration.
7. **Connect Wires:** Reconnect the wires to the new capacitor's 3+3 6.3MM 3PIN terminals. Ensure all connections are tight and correct according to the original wiring configuration.
8. **Visual Inspection:** Double-check all connections and ensure no tools or debris are left inside the microwave oven.
9. **Reassemble:** Replace the access panel and outer casing.
10. **Test:** Plug the microwave oven back into the power outlet and perform a functional test.

5. OPERATION

The QLWAHK CH85/CH86 High Voltage Capacitor is a passive component within the microwave oven's high-voltage circuit. Once correctly installed, it operates automatically as part of the oven's power supply system. No direct user interaction with the capacitor is required during normal microwave oven operation. Its primary function is to work in conjunction with the high-voltage transformer and diode to generate the necessary high DC voltage for the magnetron, which produces the microwaves for heating.

6. MAINTENANCE

High-voltage capacitors generally require minimal maintenance. However, periodic inspection can help identify potential issues before they lead to complete failure.

- **Visual Inspection:** During any routine maintenance of the microwave oven, visually inspect the capacitor for signs of damage such as bulging, leaking electrolyte, arcing marks, or discoloration.
- **Cleanliness:** Ensure the area around the capacitor is kept clean and free from dust, grease, or moisture, which can lead to arcing or insulation breakdown.
- **Do Not Repair:** Do not attempt to repair a faulty capacitor. High-voltage capacitors are sealed units and are not user-serviceable. Any signs of failure warrant immediate replacement.
- **Replacement:** If the capacitor shows any signs of degradation or failure, it must be replaced with an equivalent component by a qualified technician.

7. TROUBLESHOOTING

If your industrial microwave oven experiences issues related to the high-voltage circuit, the capacitor may be a suspect component. Common symptoms of a faulty high-voltage capacitor include:

- Microwave oven not heating food.

- Loud buzzing or humming noise from the high-voltage area.
- Visible arcing or smoke.
- Tripping of circuit breakers.

WARNING: Always discharge the capacitor before performing any diagnostic tests.

Diagnostic Steps:

1. **Visual Inspection:** After safely discharging, check the capacitor for physical damage (bulging, leaks, burns).
2. **Continuity Test:** Using a multimeter, check for continuity across the capacitor terminals. A healthy capacitor should show a brief continuity as it charges, then open circuit. A continuous short circuit indicates a faulty capacitor.
3. **Capacitance Measurement:** If your multimeter has a capacitance measurement function, measure the capacitance. Compare it to the rated 1.20 μ F. Significant deviation indicates failure.
4. **Resistance Test (Discharge Resistor):** Measure the resistance across the terminals. It should read approximately 10M Ω due to the internal discharge resistor. If it reads open or short, the resistor or capacitor is faulty.

If any tests indicate a faulty capacitor, it must be replaced. Do not attempt to repair it.

8. SPECIFICATIONS

Brand	QLWAHK
Model	CH85/CH86
Type	High Voltage Capacitor
Rated Voltage	2100V AC
Capacitance	1.20 μ F \pm 3%
Frequency	50/60Hz
Terminals	3+3 6.3MM 3PIN
Internal Discharge Resistor	10M Ω
Operating Temperature Range	-10°C to +85°C
Origin	Mainland China (Ningbo)

9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation provided with your purchase or contact your supplier. Keep your purchase receipt as proof of purchase.

