

Service Manual

Microwave Oven

Model: SMO1854DS

SHARP®

✓ **Caution**

: This document has been published to be used for after sales service only.

The contents are subject to change without notice.

SHARP®

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PRECAUTIONS TO BE OBSERVED BEFORE AND DURING SERVICING TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY

- (a) Do not operate or allow the oven to be operated with the door open.
- (b) Make the following safety checks on all ovens to be serviced before activating the magnetron or other microwave source, and make repairs as necessary: (1) Interlock operation, (2) Proper door closing, (3) Seal and sealing surfaces (arcing, wear, and other damage), (4) Damage to or loosening of hinges and latches, (5) Evidence of dropping or abuse.
- (c) Before turning on microwave power for any service test or inspection within the microwave generating compartments, check the magnetron, wave guide or transmission line, and cavity for proper alignment, integrity, and connections.
- (d) Any defective or misadjusted components in the interlock, monitor, door seal, and microwave generation and transmission systems shall be repaired, replaced, or adjusted by procedures described in this manual before the oven is released to the owner.
- (e) A microwave leakage check to verify compliance with the federal performance standard should be performed on each oven prior to release to the owner.

TABLE OF CONTENTS

PRECAUTIONS TO BE OBSERVED BEFORE AND DURING SERVICING TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY	1
PROPER USE AND SERVICE PRECAUTIONS	2
1. FOR SAFE OPERATION.....	2
2. FOR SAFE SERVICE PROCEDURES.....	2
SPECIFICATIONS	3
EXTERNAL VIEW	3
1. OUTER DIMENSIONS.....	3
2. FEATURES DIAGRAM.....	4
3. CONTROL PANEL.....	5
INSTALLATION	7
OPERATIONS AND FUNCTIONS	8
DISASSEMBLY AND ASSEMBLY.....	9
INTERLOCK MECHANISM AND ADJUSTMENT	16
TROUBLESHOOTING GUIDE.....	17
MEASUREMENT AND TEST	21
1. MEASUREMENT OF THE MICROWAVE POWER OUTPUT.....	21
2. MICROWAVE RADIATION TEST.....	22
3. COMPONENT TEST PROCEDURE	23
WIRING DIAGRAM	24
PRINTED CIRCUIT BOARD	25
1. CIRCUIT CHECK PROCEDURE.....	25
2. PCB CIRCUIT DIAGRAM	28
3. P.C.B. COMPONENT NO.....	29
EXPLODED VIEW AND PARTS LIST.....	31
1. DOOR ASSEMBLY.....	31
2. CONTROL PANEL ASSEMBLY	31
3. GUIDE WIND ASSEMBLY.....	31
4. TOTAL ASSEMBLY.....	31

PROPER USE AND SERVICE PRECAUTIONS

CAUTION

This device is to be Serviced only by Properly Qualified Service Personnel. Consult the Service Manual for Proper Service Procedures to Assure Continued Safe Operation and for Precautions to be Taken to Avoid Possible Exposure to Excessive Microwave Energy.

1. FOR SAFE OPERATION

Damage that allows the microwave energy (that cooks or heats the food) to escape will result in poor cooking and may cause serious bodily injury to the operator.

IF ANY OF THE FOLLOWING CONDITIONS EXIST, OPERATOR MUST NOT USE THE APPLIANCE.

(Only a trained service personnel should make repairs.)

- (1) A broken door hinge.
- (2) A broken door viewing screen.
- (3) A broken front panel, oven cavity.
- (4) A loosened door lock.
- (5) A broken door lock.

The door gasket plate and oven cavity surface should be kept clean.

No grease, soil or spatter should be allowed to build up on these surfaces or inside the oven.

DO NOT ATTEMPT TO OPERATE THIS APPLIANCE WITH THE DOOR OPEN.

The microwave oven has concealed switches to make sure the power is turned off when the door is opened.

Do not attempt to defeat them.

DO NOT ATTEMPT TO SERVICE THIS APPLIANCE UNTIL YOU HAVE READ THIS SERVICE MANUAL.

2. FOR SAFE SERVICE PROCEDURES

1. If the oven is operative prior to servicing, a microwave emission check should be performed prior to servicing the oven.
2. If any certified oven unit is found to have excessive emission level $5\text{mW}/\text{cm}^2$, the service person should;
 - (a) inform the manufacturer, importer or assembler,
 - (b) repair the unit at no cost to the owner,
 - (c) attempt to ascertain the cause of the excessive leakage,
 - (d) tell the owner of the unit not to use the unit until the oven has been brought into compliance.
3. If the oven operates with the door open, the service person should tell the user not to operate the oven and contact the manufacturer and CDRH immediately.

CAUTION

MICROWAVE RADIATION

PERSONNEL SHOULD NOT BE EXPOSED TO THE MICROWAVE ENERGY WHICH MAY RADIATE FROM THE MAGNETRON OR OTHER MICROWAVE GENERATING DEVICE IF IT IS IMPROPERLY USED OR CONNECTED. ALL INPUT AND OUTPUT MICROWAVE CONNECTIONS, WAVEGUIDE FLANGES AND GASKETS MUST BE SECURE. NEVER OPERATE THE DEVICE WITHOUT A MICROWAVE ENERGY ABSORBING LOAD ATTACHED. NEVER LOOK INTO AN OPEN WAVEGUIDE OR ANTENNA WHILE THE DEVICE IS ENERGIZED.

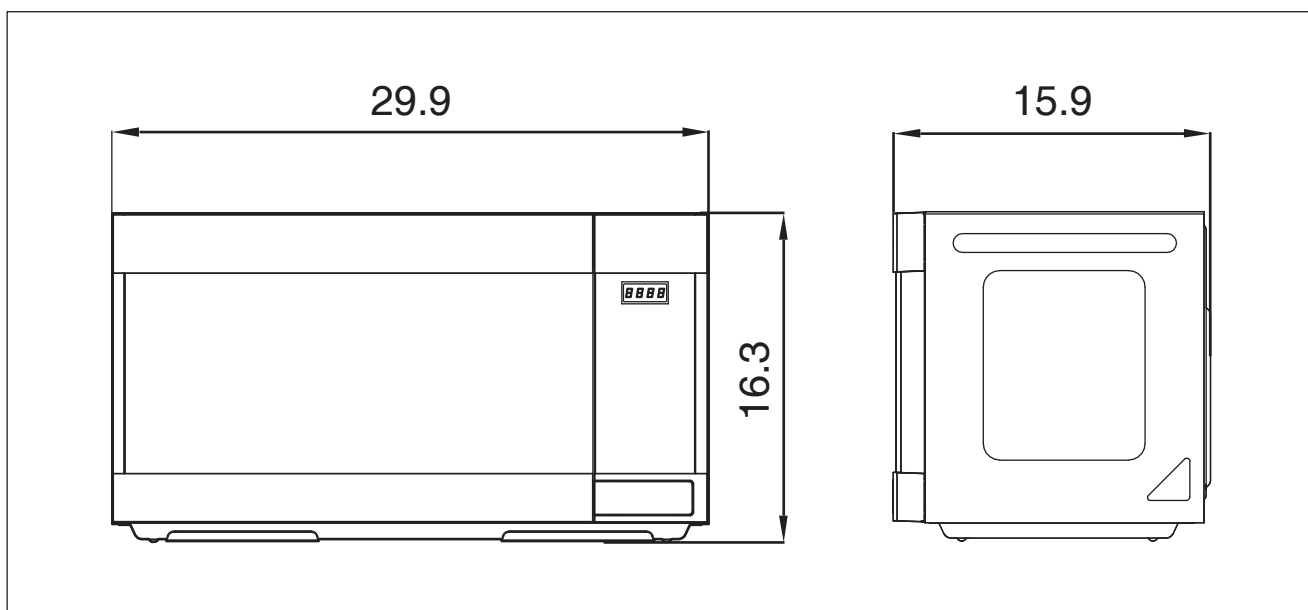
SPECIFICATIONS

POWER SUPPLY		120V AC, 14.7 AMPS, 60Hz SINGLE PHASE WITH GROUNDING
MICROWAVE	INPUT POWER	1700 W
	ENERGY OUTPUT	1100 W
	FREQUENCY	2,450MHz
OUTSIDE DIMENSIONS (W x H x D)		29.9 x 16.3 x 15.9 in
CAVITY DIMENSIONS (W x H x D)		20.6 x 10.0 x 14.9 in
CAVITY VOLUME		1.8 cu.ft
NET WEIGHT		APPROX. 51.1 lbs
TIMER		99 min. 99 sec.
POWER SELECTIONS		10 Levels

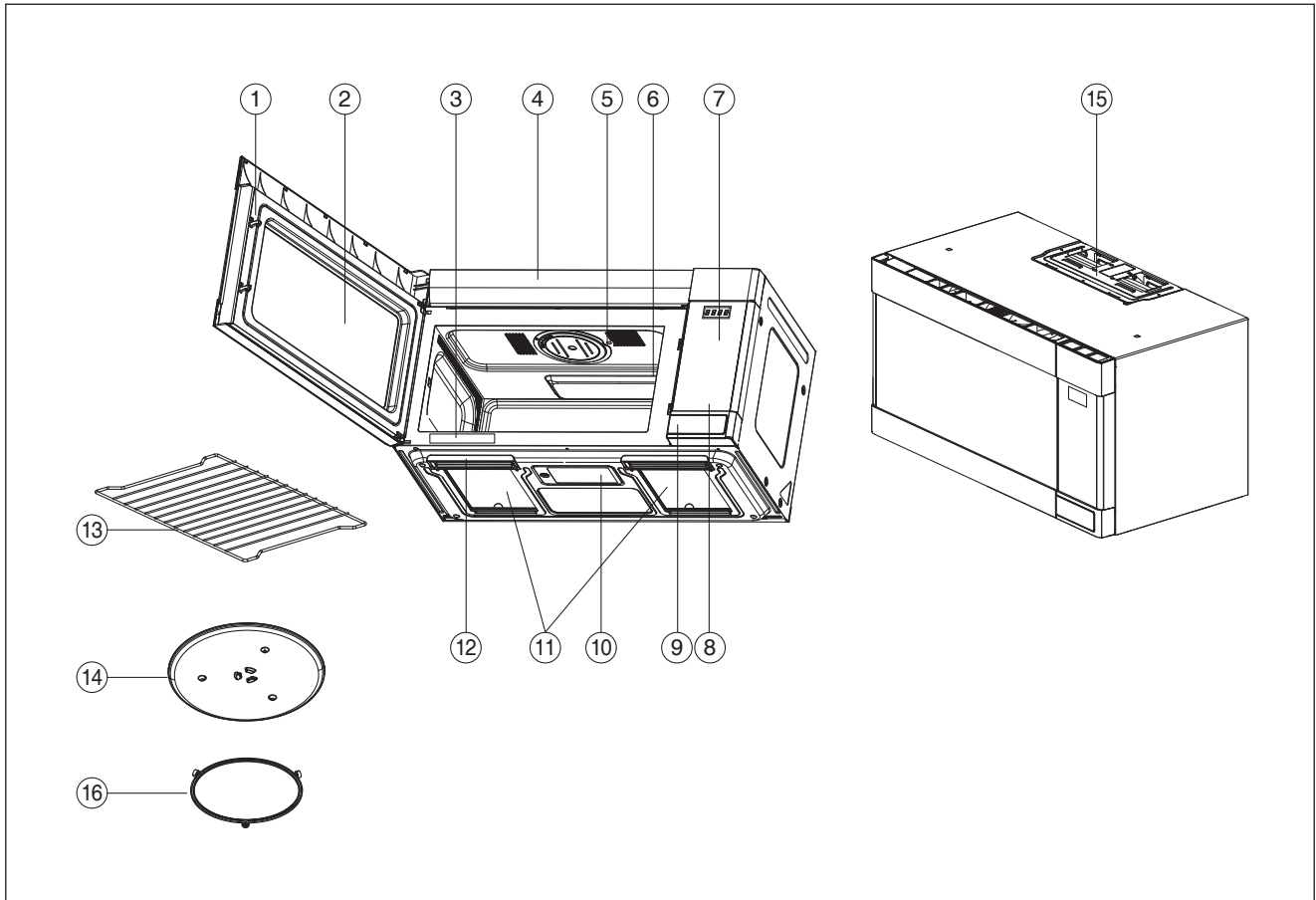
EXTERNAL VIEW

1. OUTER DIMENSION

(Unit : in.)



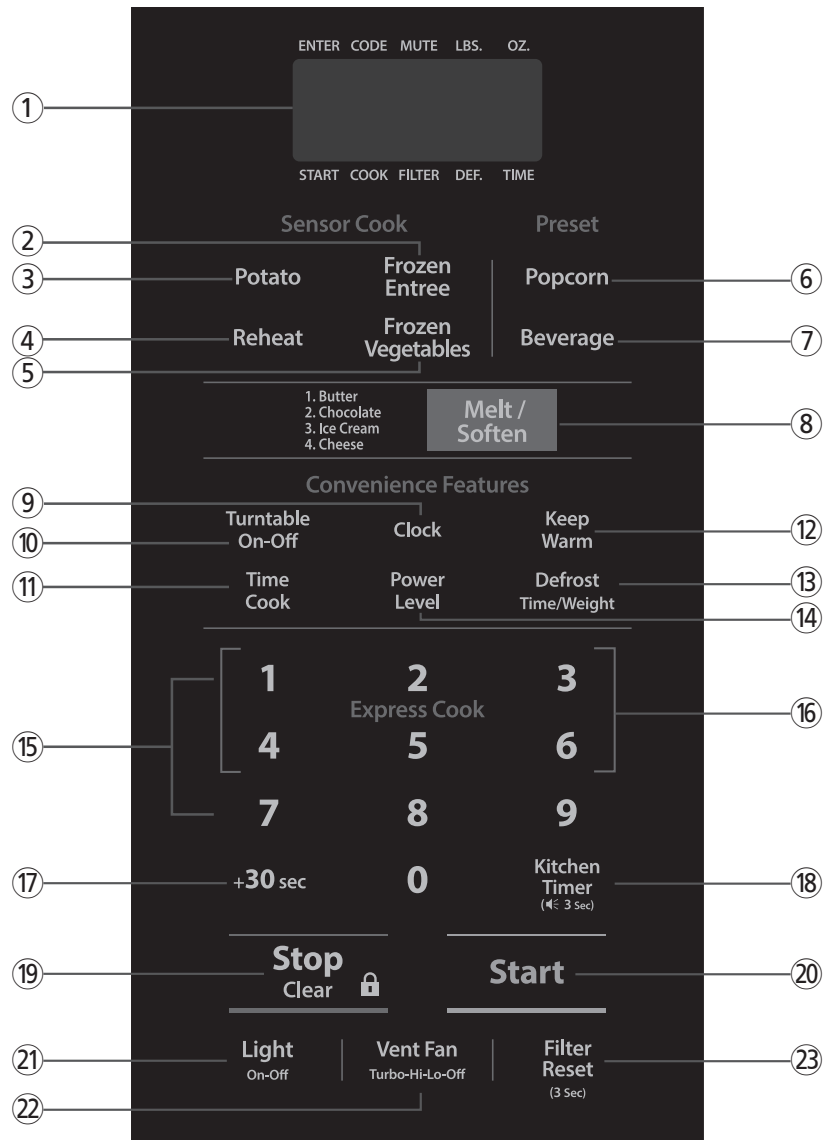
2. FEATURES DIAGRAM



- ① **DOOR LATCHES**
- ② **WINDOW with METAL SHIELD** - Screen allows cooking to be viewed while keeping microwaves confined in oven.
- ③ **MODEL NUMBER PLATE** - Located on the front wall of the microwave oven.
- ④ **CHARCOAL FILTER (behind Vent Grille)**
- ⑤ **OVEN LIGHT**
- ⑥ **WAVEGUIDE COVER**
Protects the microwave outlet from splashes of cooking foods.
- ⑦ **TOUCH CONTROL PANEL and DIGITAL DISPLAY** - For detailed information on each feature, see Features Diagram section, page 5,6.
- ⑧ **HOOD CONTROLS**
Vent Fan - Press Turbo, High, Low or Off.
Light - Press On or Off
- ⑨ **DOOR BUTTON** - To open the door push the door open button.
- ⑩ **COOKTOP LIGHT**
- ⑪ **GREASE FILTERS**
- ⑫ **HANDLE FILTERS** - Use to insert Grease Filters.
- ⑬ **METAL RACK** - Use for extra space when cooking with more than one container at the same time.
- ⑭ **TURNTABLE / GLASS TRAY** - Must be in place on top of roller tray when using the microwave oven.
- ⑮ **VENTILATION MOTOR** - Your microwave oven is designed for adaptation to the following three types of ventilation.
(Recirculation ventilation system, Vertical ventilation system, Horizontal ventilation system)
See installation manual to Select the type of ventilation required for your installation.
- ⑯ **ROLLER GUIDE** - Placed first on the bottom of the microwave and support the glass tray.

3. CONTROL PANEL

The Touch Control Panel allows you to set the oven controls with the press of a finger. It's designed to be easy to use and understand.



- ◆ Each time a pad is pressed, a BEEP will sound.
- ◆ When **STOP/CLEAR** Pad is pressed during oven operation, the oven will stop, however, all programmed information is retained. To clear all information, press the **STOP/CLEAR** Pad again.

- ① **DISPLAY** - Displays time of day, time or power level being used, cooking mode and instructions.
- ② **FROZEN ENTREE** - Press this pad to cook Frozen Entree. The microwave oven sensor will automatically adjust the cooking time to the type and amount of food.
- ③ **POTATO** - Press this pad to cook Potato. The microwave oven sensor will automatically adjust the cooking time to the type and amount of food.
- ④ **REHEAT** - Press this pad to reheat food. The microwave oven sensor will automatically adjust the cooking time to the type and amount of food.
- ⑤ **FROZEN VEGETABLES** - Press this pad to cook Frozen vegetables. The microwave oven sensor will automatically adjust the cooking time to the type and amount of food.
- ⑥ **POPCORN** - Press this pad to cook prepackaged microwave popcorn weight 3.5/3.0/1.75 ounces.
- ⑦ **BEVERAGE** - Press this pad to reheat a beverage.
- ⑧ **MELT/SOFTEN** - Press this pad to melt or soften Butter, Chocolate, Ice Cream and Cheese.
- ⑨ **CLOCK** - Press this pad to enter time of day.

Also press and hold this pad for 3 seconds to set power save mode. For detailed information on this feature, see Controls section, page 25 of instruction manual.

- ⑩ **TURNTABLE On-Off** - Press this pad to turn turntable on or off.
- ⑪ **TIME COOK** - Press this pad to set the Microwave cooking time.
 - ◆ Power Level 10 (High) is automatic but lower heat levels may be programmed.
- ⑫ **KEEP WARM** - Press this pad and safely keep food warm for up to 30 minutes.
- ⑬ **DEFROST** - Press this pad to set defrosting time or defrosting weight.

- ⑭ **POWER LEVEL** - Press this pad if you want to change from automatic Power Level 10 (High) for cooking.
- ⑮ **NUMBER PADS** - Press these pads to enter cooking time, defrosting time or weight, time of day, power level.
- ⑯ **EXPRESS COOK** - Press these pads to set 1-6 minutes preset cooking time at 100% power level.
- ⑰ **+30 SEC** - Press this pad for 30 seconds instant "ON" cooking time or to add 30 seconds of cooking time as the timer is counting down.
- ⑱ **KITCHEN TIMER** - Press this pad to use as a minute timer, delay cooking, hold setting after cooking.

Also press and hold this pad for 3 seconds to set sound on/off. For detailed information on this feature, see Controls section, page 25 of instruction manual.

- ⑲ **STOP/CLEAR** - When pressed once, it pauses the oven operation. When pressed twice, it resets the oven and erases all settings (except time of day)

Also press and hold this pad for 3 seconds to set child safety lock function. For detailed information on this feature, see Controls section, page 25 of instruction manual.

- ⑳ **START** - After all selections are made, press this pad to start the oven or timer.
- ㉑ **LIGHT** - Press this pad to turn on or off the cooktop light.
- ㉒ **VENT FAN** - Press this pad to turn the fan on turbo, high, low or off.
- ㉓ **FILTER RESET** - Press and hold this pad for 3 seconds to reset time after replacing the filter. Charcoal filters must be replaced every 6 months.

INSTALLATION

1. Safety Instructions

This product requires a three prong grounded receptacle. The installer must perform a ground continuity check on the power outlet box before beginning the installation to insure that the outlet box is properly grounded. If not properly grounded, or if the outlet box does not meet the electrical requirements noted, (under ELECTRICAL REQUIREMENTS), a qualified electrician should be employed to correct any deficiencies.

CAUTION: FOR PERSONAL SAFETY, REMOVE HOUSE FUSE OR OPEN CIRCUIT BREAKER BEFORE BEGINNING INSTALLATION TO AVOID SEVERE OR FATAL SHOCK INJURY. CAUTION:FOR PERSONAL SAFETY, THE MOUNTING SURFACE MUST BE CAPABLE OF SUPPORTING THE CABINET LOAD, IN ADDITION TO THE ADDED WEIGHT OF THIS 85 POUND PRODUCT, PLUS ADDITIONAL OVEN LOADS OF UP TO 50 POUNDS OR A TOTAL WEIGHT OF 135 POUNDS.

CAUTION: FOR PERSONAL SAFETY THIS PRODUCT CANNOT BE INSTALLED TO CABINET ARRANGEMENT'S SUCH AS AN ISLAND OR A PENINSULA. IT MUST BE MOUNTED TO BOTH A TOP CABINET AND A WALL.

2. Electrical Requirements

Product rating is 120 volts AC, 60Hertz, 14.7 amps, and 1600 ~1700 watts.

This product must be connected to a supply circuit of the proper voltage and frequency. Wire size must conform to the requirements of the National Electric Code or the prevailing local code for this kilowatt rating. The power supply cord and plug should be brought to a separate 20ampere branch circuit single grounded receptacle. The outlet box should be located near the cord entry point. The outlet box and supply circuit should be installed by a qualified electrician and conform to the National Electric Code or the prevailing local code.

Power supply cord

- a) A short power-supply cord is provided to reduce the risks resulting from becoming entangled in or tripping over a longer cord.
- b) Longer cord sets or extension cords are available and may be used if care is exercised in their use.
- c) If a long cord or extension cord is used:
 - 1) The marked electrical rating of the cord set or extension cord should be at least as great as the electrical rating of the appliance.
 - 2) The extension cord must be a grounding type 3-wire cord, and
 - 3) The longer cord should be arranged so that it will not drape over the counter top or tabletop where it can be pulled on by children or tripped over unintentionally.

This over-the-range oven was designed for use over ranges no wider than 30inches. It may be installed over both gas and electric cooking equipment.

* Please see the Installation Manual for details.

GROUNDING INSTRUCTIONS

This appliance must be grounded. In the event of an electrical short circuit, the grounding plug reduces the risk of electric shock by providing an escape wire for electric current. This appliance is equipped with a cord having a grounding wire with a grounding plug. The plug must be plugged into an outlet that is properly installed and grounded.

WARNING

Improper use of the grounding can result in a risk of electric shock.

Consult a qualified electrician or serviceman if the grounding instructions are not completely understood, or if doubt exists as to whether the appliance is properly grounded, and if it is necessary to use an extension cord, use only a 3-wire extension cord that has a 3-blade grounding plug, and a 3-slot receptacle that will accept the plug on the appliance. The marked rating of the extension cord shall be equal to or greater than the electrical rating of the appliance.

WARNING

Do not cut or remove the third (ground) prong from the power cord under any circumstances.

OPERATIONS AND FUNCTIONS

This section includes useful information about oven operation.

1. Plug power supply cord into a standard 3-pronged 14.7 Amps 120V AC 60Hz power outlet.
2. After placing the food in a suitable container, open the oven door and put it on the glass tray.
The glass tray and roller guide must always be in place during cooking.
3. Close the door. Make sure that it is firmly closed.
4. The oven light is on when the microwave oven is operating.
5. The oven door can be opened at any time during operation by pushing the door open button of control panel.
The oven will automatically stop.
6. Each time a pad is pressed, a BEEP will sound to acknowledge the press.
7. The oven automatically cooks on full power unless set to a lower power level.
8. The display will show “ : 0” when the oven CLOCK is not set.
9. Time clock returns to the present time when the cooking time ends.
10. When the STOP/CLEAR pad is pressed during the oven operation, the oven stops cooking and all information retained.
To erase all information(except the present time), press the STOP/CLEAR pad once more. If the oven door is opened during the oven operation, all information is retained.
11. If the START pad is pressed and the oven does not operate, check the area between the door and door seal for obstructions and make sure the door is closed securely. The oven will not start cooking until the door is completely closed or the program has been reset.

Make sure the oven is properly installed and plugged into the electrical outlet.

TO SET POWER LEVEL

- The power-level is set by pressing the Power Level pad and number pad. If you wish to use a different power level, press the POWER LEVEL pad before pressing START pad. Enter the power level desired by pressing the appropriate number pad. The chart shows the display, the power level and the percentage of power.

PRESS POWER PAD AND NUMBER	POWER LEVEL (DISPLAY)	APPROXIMATE PERCENTAGE OF POWER
POWER LEVEL + 1 + 0	PL10	100%
POWER LEVEL + 9	PL-9	90%
POWER LEVEL + 8	PL-8	80%
POWER LEVEL + 7	PL-7	70%
POWER LEVEL + 6	PL-6	60%
POWER LEVEL + 5	PL-5	50%
POWER LEVEL + 4	PL-4	40%
POWER LEVEL + 3	PL-3	30%
POWER LEVEL + 2	PL-2	20%
POWER LEVEL + 1	PL-1	10%
POWER LEVEL + 0	PL-0	0%

NOTE : If “PL-0” is selected, the oven will work with the fan but no power. You can use this level to remove odors.

DISASSEMBLY AND ASSEMBLY

Cautions to be observed when troubleshooting.

Unlike many other appliances, the microwave oven is high-voltage, high-current equipment. It is completely safe during normal operation.

However, carelessness in servicing the oven can result in an electric shock or possible danger from a short circuit. You are asked to observe the following precautions carefully.

1. Always remove the power plug from the outlet before servicing.
2. Use an insulated screwdriver and wear rubber gloves when servicing the high voltage side.
3. Discharge the high voltage capacitor before touching any oven components or wiring.

(1) Check the grounding.

Do not operate on a two-wire extension cord.

The microwave oven is designed to be used while earthed.

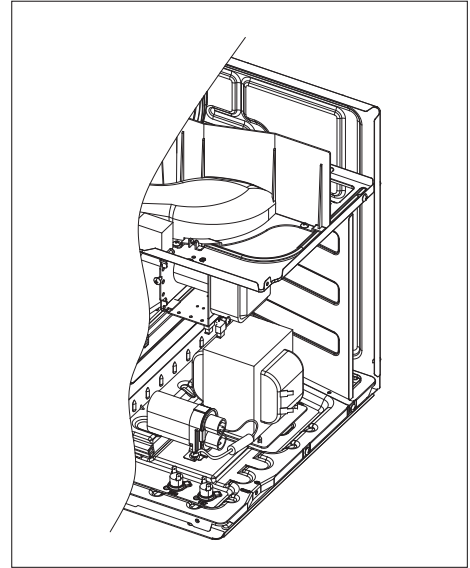
It is imperative, therefore, to make sure it is earthed properly before beginning repair work.

(2) Warning about the electric charge in the high voltage capacitor.

For about 30 seconds after the operation stopped and electric charge remains in the high voltage capacitor.

When replacing or checking parts, short between oven chassis and the negative high terminal of the high voltage capacitor by using a properly insulated screwdriver to discharge.

4. When the fuse is blown out due to the operation of the monitor switch; replace primary interlock switch, secondary interlock switch and interlock monitor switch.
5. After repair or replacement of parts, make sure that the screws are properly tightened, and all electrical connections are tightened.
6. Do not operate without cabinet.



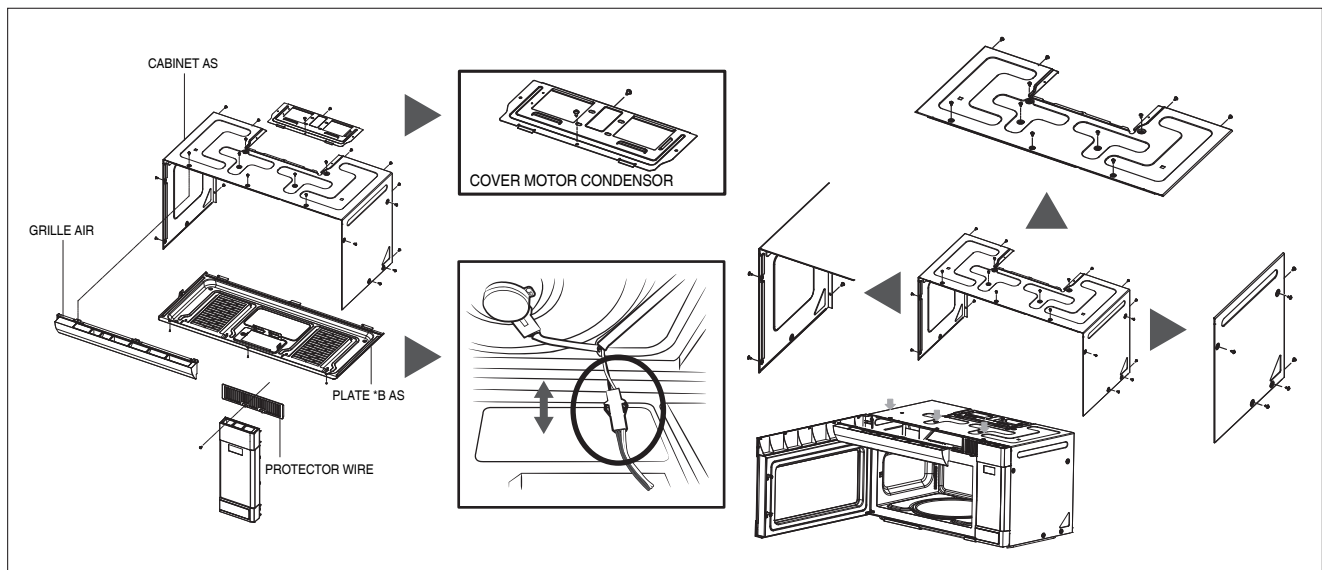
CAUTION : Service personnel should remove their watches whenever working close to or replacing the magnetron.

WARNING : When servicing the appliance, exercise care when touching or replacing high potential parts because of electrical shock or exposing microwave. These parts are as follows - HV Transformer, Magnetron, HV Capacitor, HV Diode.

1. To remove cabinet and plate *b assembly

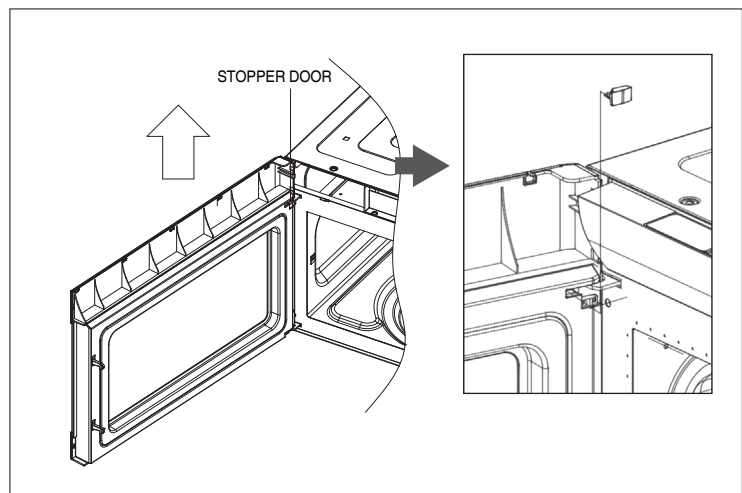
- 1) Remove the microwave oven from its mounting location and set it on a protected (padded) work surface.
- 2) Remove the 3 screws from the top of the microwave oven that secure the vent grille to the oven, and pull the top of the vent grille out so the tabs are from their slots, and remove it.
- 3) Remove 2 screws from the cover motor condensor.
- 4) Remove the remaining 17 screws from the top side and rear of the cabinet.
Slide the cabinet back and unhook it from the side tabs, then slide the power cord into the cabinet, and lift the cabinet off the oven.
- 5) Remove the 3 screws from the bottom of the microwave oven that secure the plate *b assembly to the oven, and disconnect housing of cooktop light, and remove plate *b assembly.

Proceed to the section for the component you wish to service.



2. To remove door assembly

- 1) Open the door and remove the stopper door.
- 2) Lift the door and remove it.

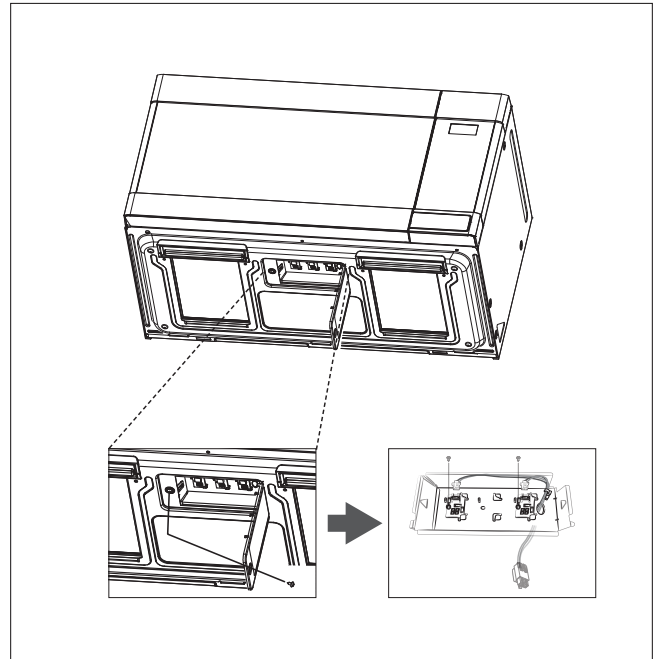


NOTE : After replacing the door assembly, perform a check of correct alignment with the hinge and cavity front plate.

3. Replace cooktop light

When replacing the cooktop light, make sure you allow the cooktop lights to cool down and wear gloves to avoid injury from the heat of the lamps.

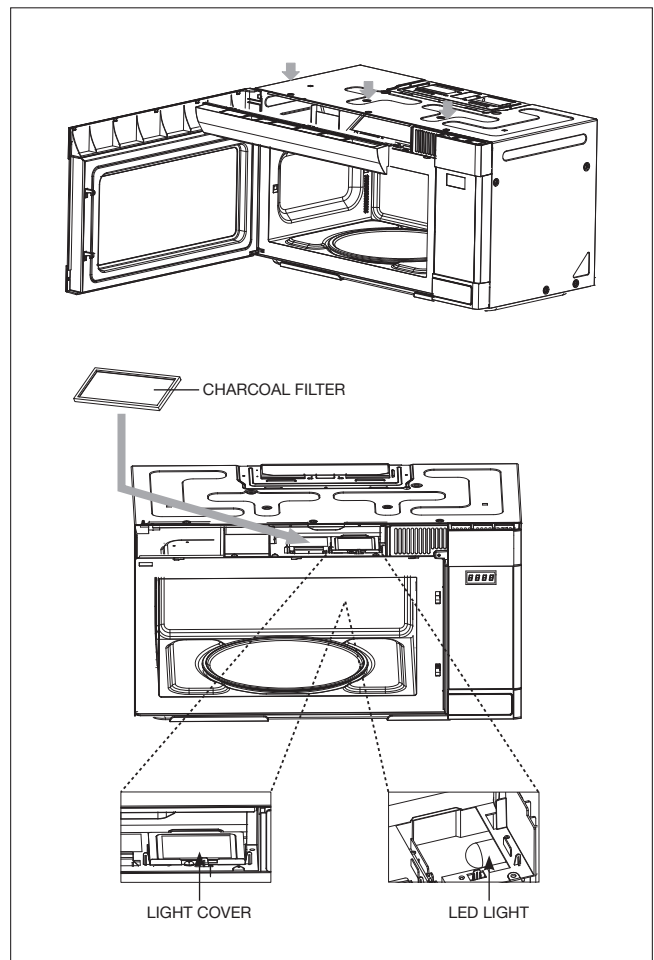
- 1) Unplug the oven or turn off the power at the main power supply.
- 2) Remove the screw from the light cover and lower the cover until it stops.
- 3) Remove the screw of the LED Light secured to the Cover and pull out connectors.
- 4) Replace with 1.0-watt LED light available from your authorized dealer and secure with screw. You can purchase LED cooktop light from 1-800-BE-SHARP.
- 5) Reverse the above steps for reassembly.



4. Replace oven light

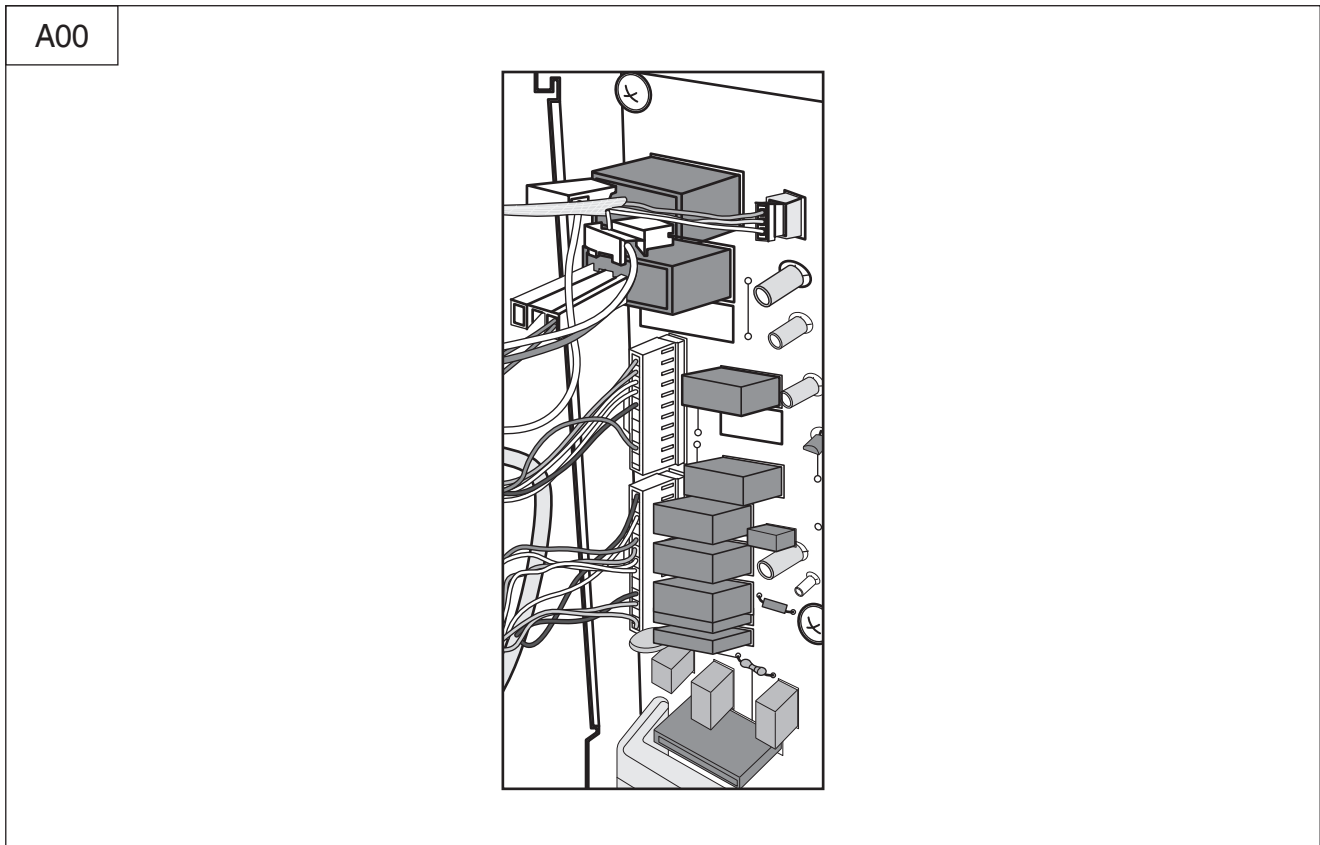
When replacing the internal oven light, make sure you allow oven light to cool down and wear gloves to avoid injury from the heat of the lamp.

- 1) Unplug the oven or turn off the power at the main power supply.
- 2) Remove the vent grille mounting 3 screws and open the door.
- 3) Slide the grille air to the left, then pull it straight out.
- 4) Remove the charcoal filter, if present
- 5) Pull the hook a little and remove light cover.
- 6) Push the right hook holding the oven light to the right side and remove the LED light.
- 7) Replace with 0.4-watt LED light available from your authorized dealer. You can purchase Oven Light from 1-800-BE-SHARP.
- 8) Reverse the above steps for reassembly.



5. To remove control panel assembly and PCB

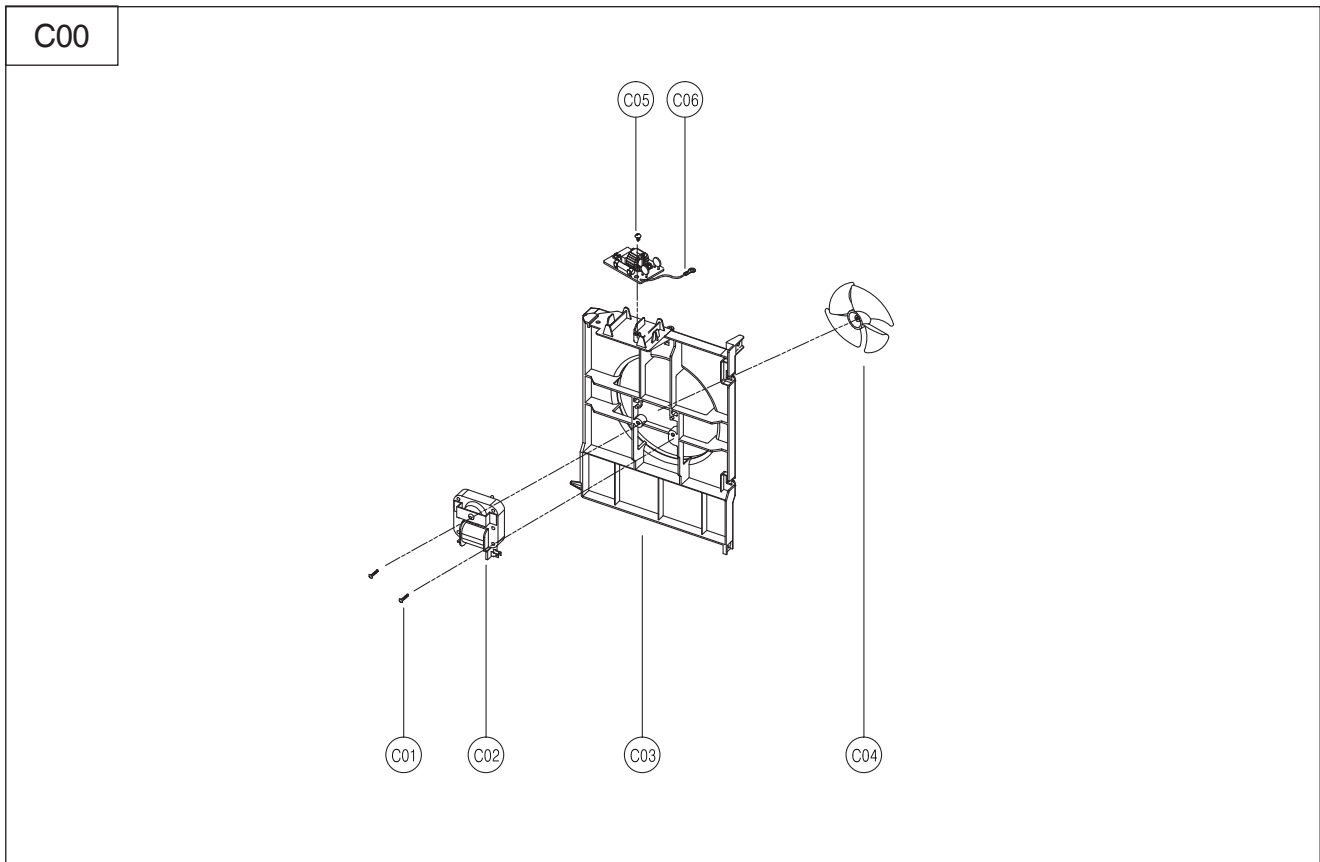
- 1) Unplug the oven or turn off the power at the main power supply.
- 2) Remove the vent grille mounting 3 screws and open the door.
- 3) Slide the grille air to the left, then pull it straight out.
- 4) Remove a screw secured to the control panel assembly.
- 5) Pull out the connectors from the PCB.
- 6) Remove 5 screws of PCB.
- 7) Reverse the above steps for reassembly.



NO	PART CODE	PART NAME	Q'TY	REMARK
B01	9KC35116-0043300	DECORATOR BUTTON	1	
B02	9KC35169-0030200	BUTTON DOOR OPEN	1	
B03	9KC441G430171	SPRING DOOR BUTTON	2	
B04	9KC35116-0043200	DECORATOR C-PANEL *U	1	
B05	9KC35116-0043100	DECORATOR C-PANEL *T	1	
B06	9KC65192-0030000	SWITCH MEMBRANE	1	
B07	9KC35167-0110800	CONTROL-PANEL	1	
B08	9KC35168-0000500	BACK-PLATE AS	1	
B09	9KC35137-0003100	LEVER DOOR OPEN	1	
B10	9KC40303-0115400	MWO PCB MAIN ASSY	1	
B11	9KC7122401211	SCREW TAPPING	4	

- 1) Remove the screw which secure the control panel and draw forward the control panel assembly.
- 2) Remove 5 screws which secure the PCB assembly.
- 3) Pull out the PCB assembly from the control panel.
- 4) Disconnect membrane tail from the connector of the PCB assembly.
- 5) Remove the PCB from the control panel as.
- 6) Remove the membrane, lever door open, spring button and button door open from the control panel.
- 7) Reverse the above steps for reassembly.

6. To remove guide wind parts.

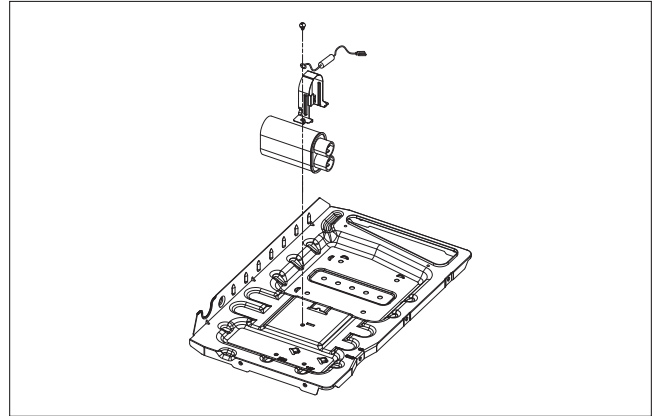


NO	PART CODE	PART NAME	Q'TY	REMARK
C01	9KC7121402511	SCREW TAPPING	2	
C02	9KC3963822200	MOTOR SHADED POLE	1	
C03	9KC35125-0024100	GUIDE WIND	1	
C04	9KC3511800100	FAN	1	
C05	9KC3518608000	NOISE-FILTER	1	
C06	9KC7S312X40A1	SCREW SPECIAL	1	

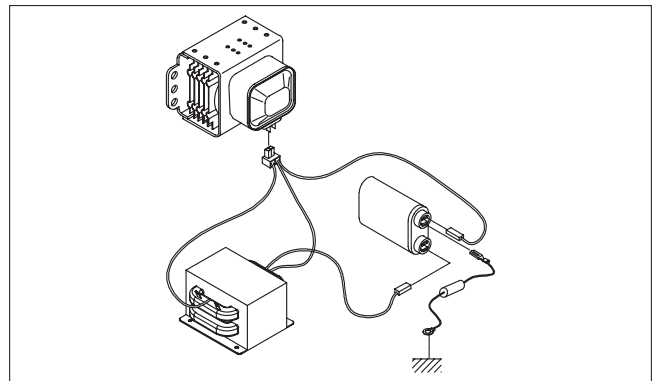
- 1) Remove 3 screws for grounding and for fixing to Oven cavity.
- 2) Remove the noise filter from the guide wind.
- 3) Pull the fan from the motor shaft.
- 4) Remove 2 screws which secure the motor shaded pole.
- 5) Remove the motor shaded pole.
- 6) Reverse the above steps for reassembly.

7. To remove high voltage capacitor.

- 1) Remove the screw which secure the grounding ring terminal of the H.V. diode and the capacitor holder.
- 2) Remove the H.V. diode from the capacitor holder.
- 3) Reverse the above steps for reassembly.

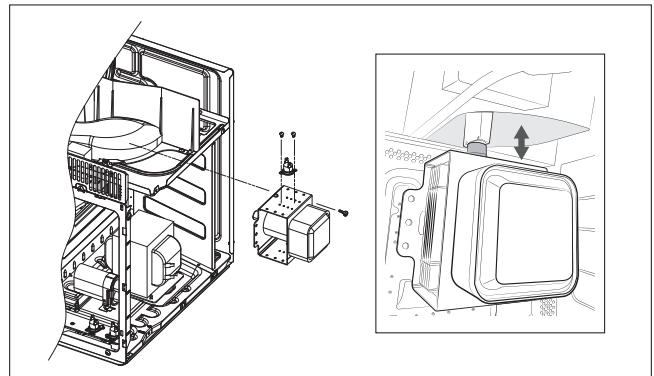


◆ High voltage circuit wiring

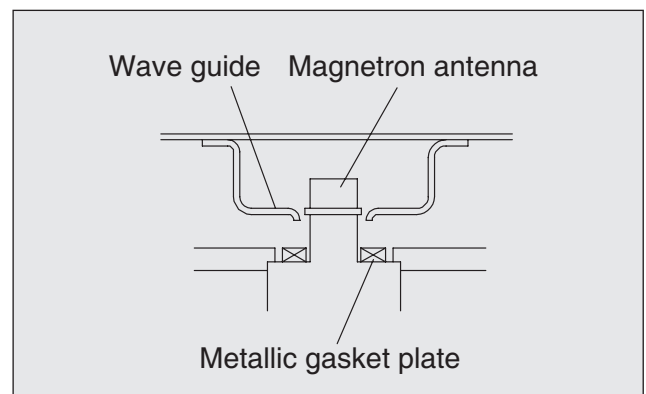
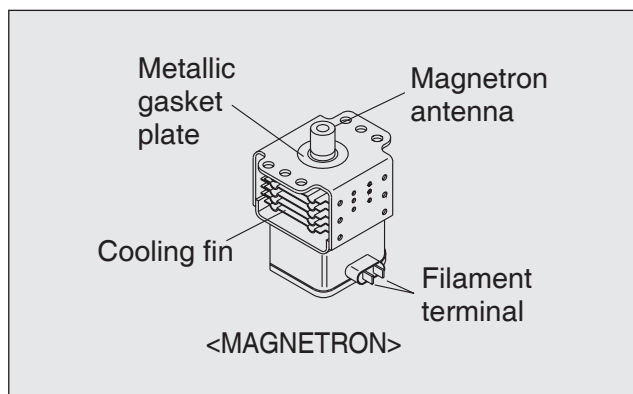


8. To remove magnetron.

- 1) Pull out two terminals from the thermostat of magnetron.
- 2) Remove a screw which secure the magnetron.
- 3) Remove the magnetron.
- 4) Remove the screws which secure the thermostat.
- 4) Reverse the above steps for reassembly.

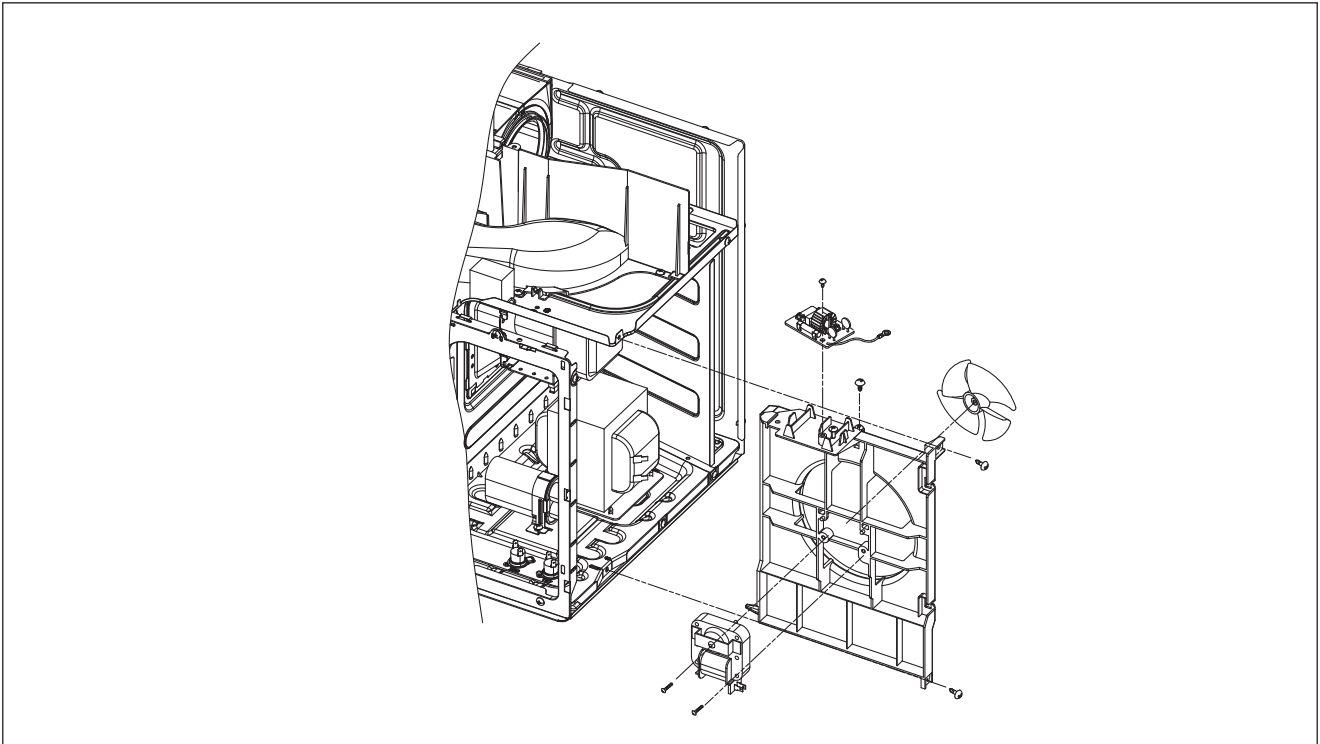


NOTE : Never install the magnetron without the metallic gasket plate which is packed with each magnetron to prevent microwave leakage. Whenever repair work is carried out on magnetron, check the microwave leakage. It shall not exceed $4\text{mW}/\text{cm}^2$ for a fully assembled oven with door normally closed.



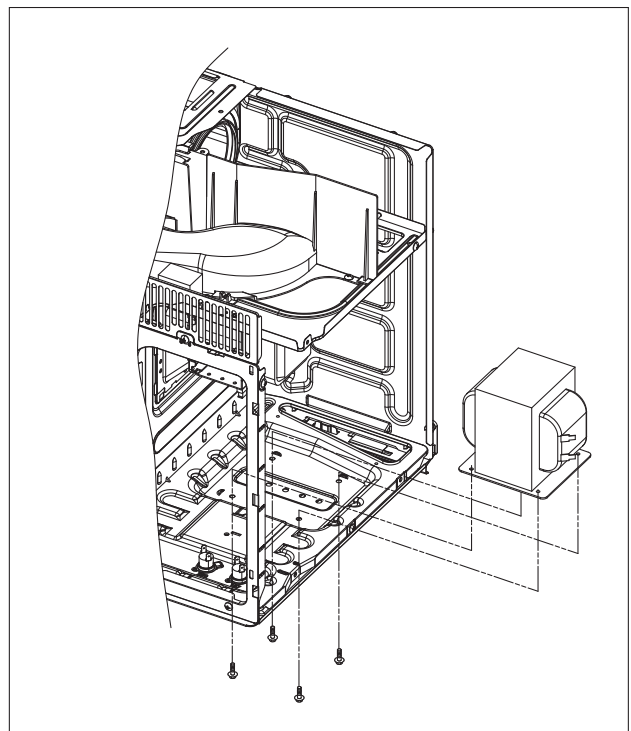
9. To remove wind guide assembly.

- 1) Remove the screw for grounding.
- 2) Remove the noise filter from the wind guide.
- 3) Remove the screw which secure the wind guide assembly.
- 4) Draw forward the wind guide assembly.
- 5) Pull the fan from the motor shaft.
- 6) Remove two screws which secure the motor shaded pole.
- 7) Remove the motor shaded pole.
- 8) Reverse the above steps for reassembly.



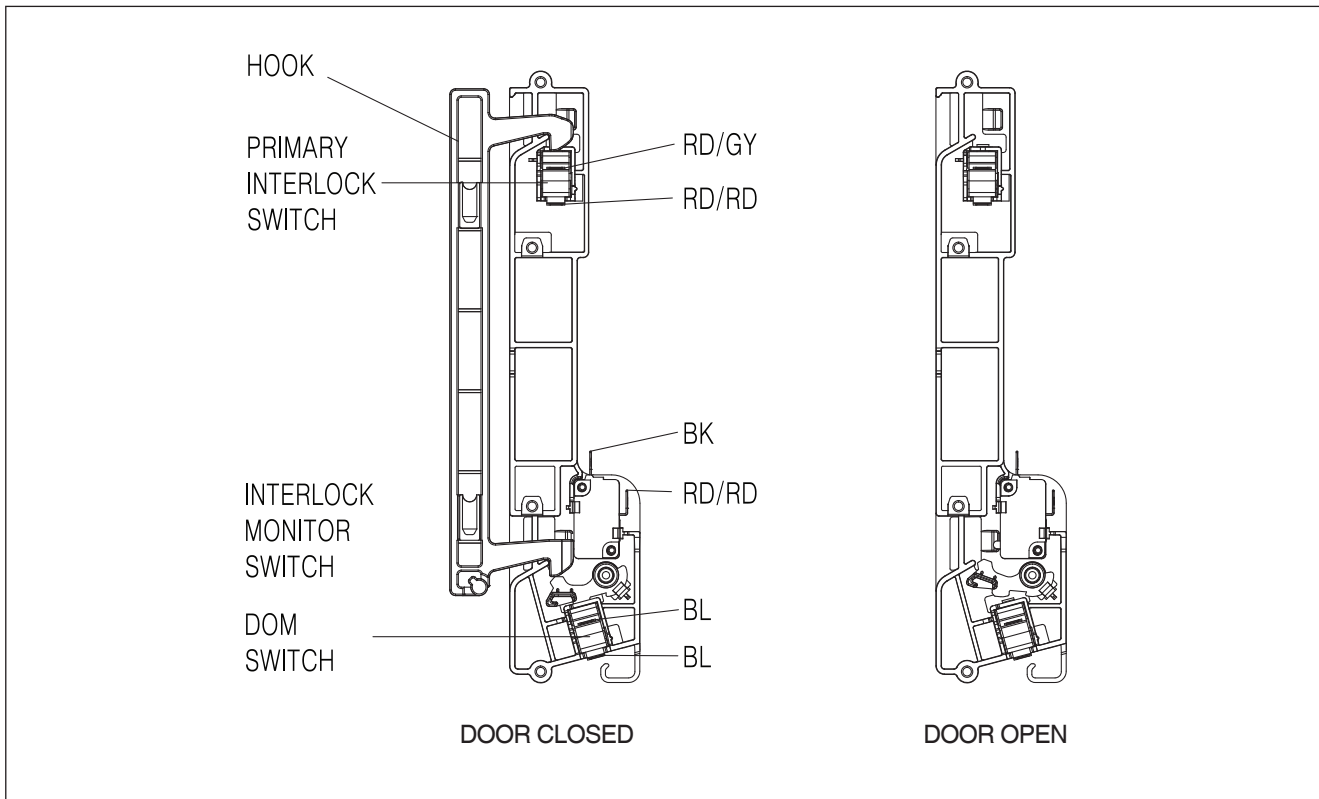
10. To remove H.V.transformer.

- 1) Remove four screws holding the H.V.transformer.
- 2) Remove the H.V.transformer.
- 3) Reverse the above steps for reassembly.



INTERLOCK MECHANISM AND ADJUSTMENT

The door lock mechanism is a device which has been specially designed to completely eliminate microwave radiation when the door is opened during operation, and thus to perfectly prevent the danger resulting from the leakage of microwave.



(1) Primary interlock switch

When the door is closed, the hook locks the oven door. If the door is not closed properly, the oven will not operate. When the door is closed, the hook pushes the button of the microswitch. Then the button of the primary interlock switch bring it under "ON" condition.

(2) Secondary interlock switch and interlock monitor switch

When the door is closed, the hook pushes the lock lever downward. The lock lever presses the button of the interlock monitor switch to bring it under "OFF" condition and presses the button of the secondary interlock switch to bring it under "ON" condition.

ADJUSTMENT :

Interlock monitor switch

When the door is closed, the interlock monitor switch should be "OFF" condition before other switches are closed. When the door is opened, the interlock monitor switch should be "ON" condition after other switches are opened.

(3) Adjustment steps

- Loosen the mounting screw.
- Adjust interlock switch assembly position.
Actuation distance of primary and secondary interlock switch can be adjusted up to 0.7mm.
- Make sure that lock lever moves smoothly after adjustment is completed.
- Completely tighten all mounting screws.

NOTE :

- Service personnel have to reconnect and check continuity of Monitor Circuit.
- Service personnel have to replace all monitored safety interlocks after monitored interlock failure.
- Microwave emission test should be performed after adjusting interlock mechanism or replacing of all monitored safety interlocks after monitored interlock failure.
If the microwave emission exceed $4\text{mW}/\text{cm}^2$, readjust interlock mechanism.

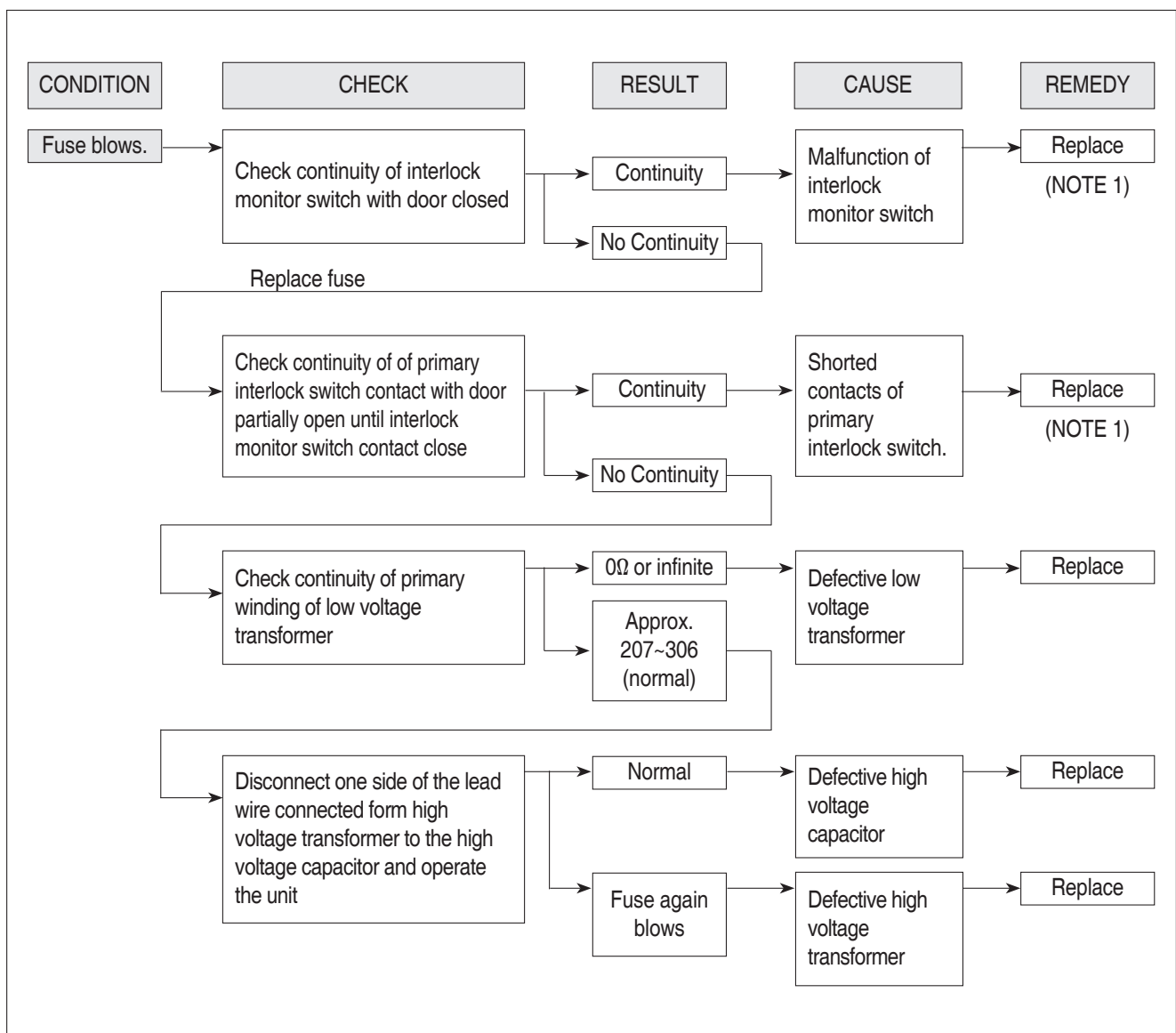
TROUBLESHOOTING GUIDE

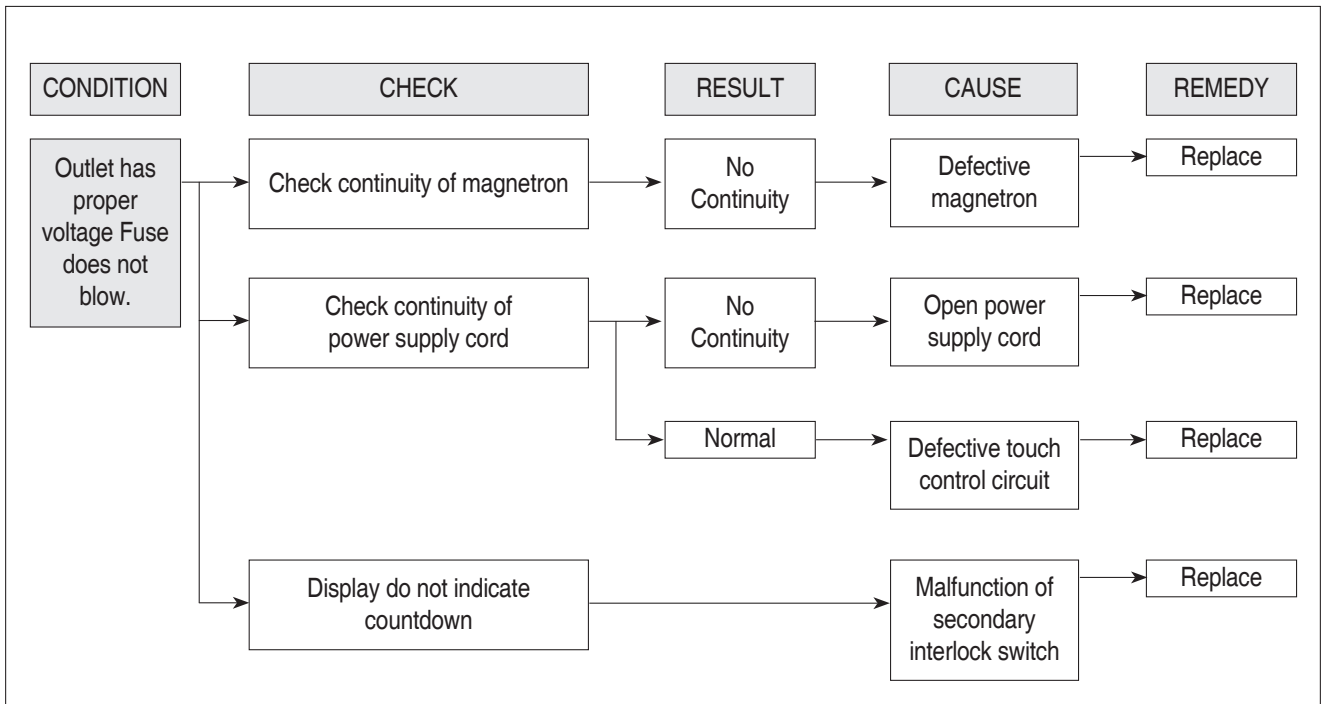
Following the procedures below to check if the oven is defective or not.

1. Check grounding before trouble checking.
2. Be careful of the high voltage circuit.
3. Discharge the high voltage capacitor.
4. When checking the continuity of the switches, fuse or high voltage transformer, disconnect one lead wire from these parts and check continuity with the AC plug removed. To do otherwise may result in a false reading or damage to your meter.

NOTE : When electric parts are checked, be sure the power cord is not inserted the wall outlet. Check wire harness, wiring and connections of the terminals and power cord before checking the parts listed below.

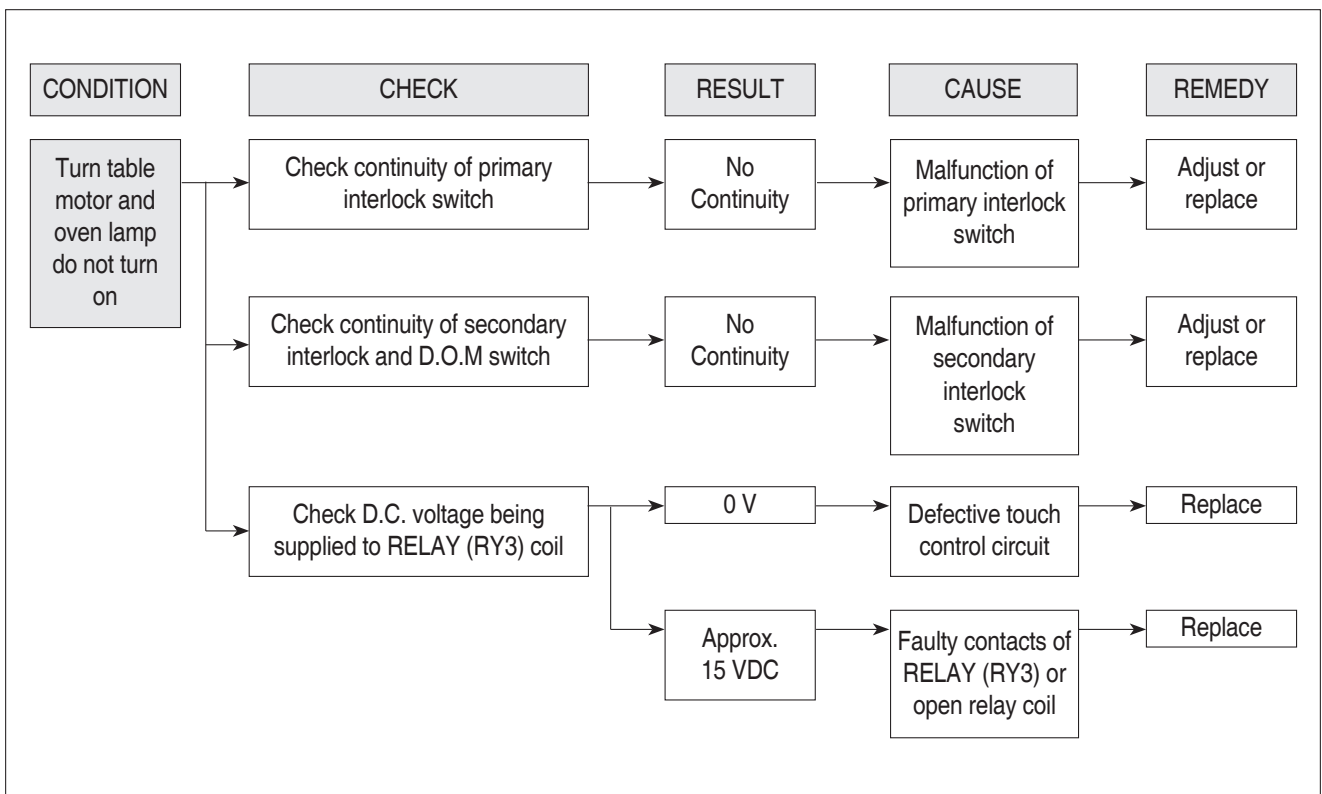
(TROUBLE 1) Oven does not operate at all ; any inputs can not be accepted.



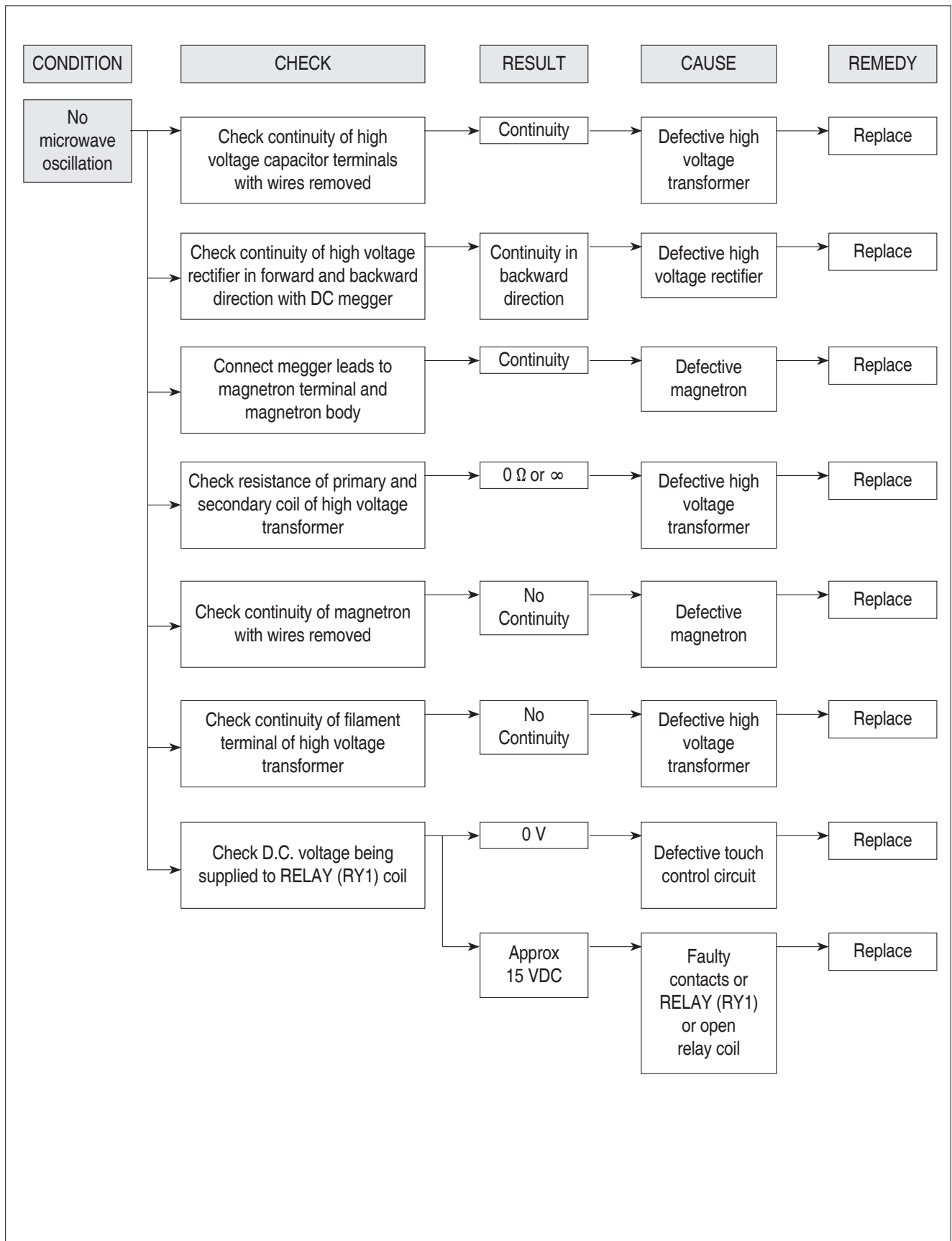


NOTE 1
 All these switches must be replaced at the same time, please refer to "Interlock Mechanism And Adjustment".
 Whenever safety interlock switches are replaced: check the wiring color, the connection of monitor switch, and perform the electrical continuity of interlock switches and microwave radiation emission test.

(TROUBLE 2) Display shows all figures selected, but oven does not start cooking, even though desired program and time are set and the START pad is pressed.

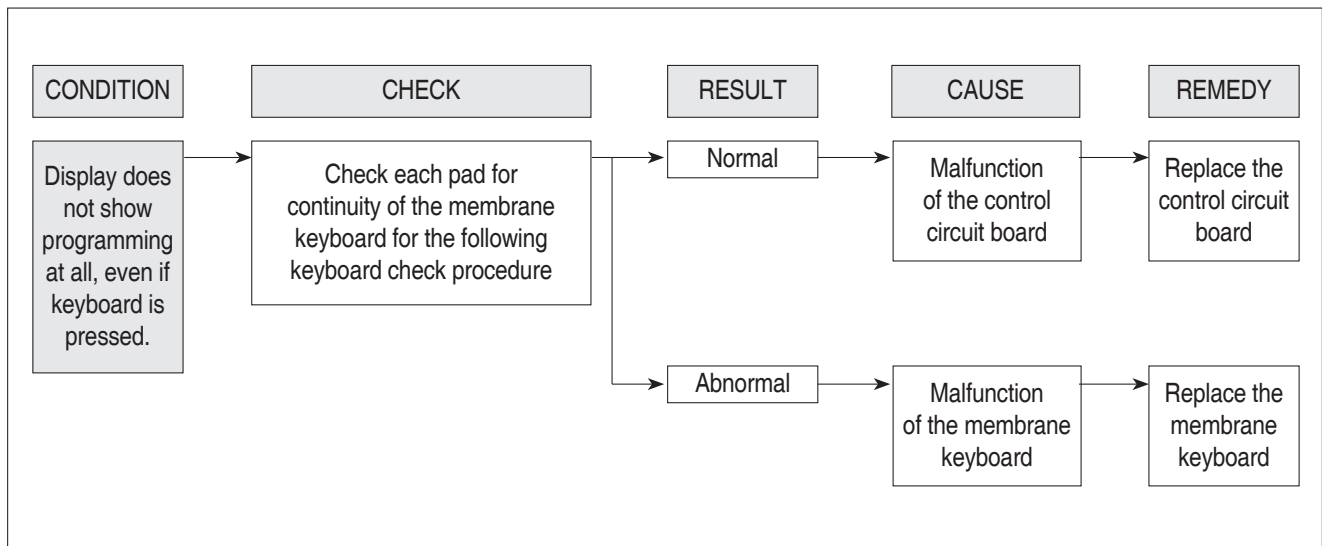
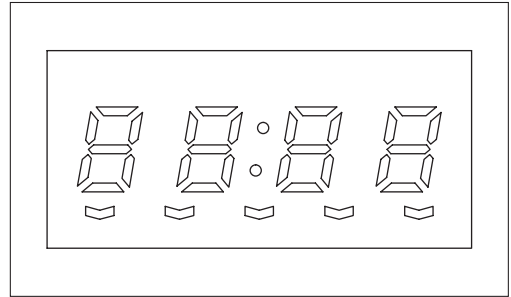


(TROUBLE 3) No microwave oscillation even though fan motor rotates.



(TROUBLE 4) The following visual conditions indicate a probable defective touch control circuit

1. Incomplete segments,
 - 1) Segments missing.
 - 2) Partical segments missing.
 - 3) Digit flickering other than normal display slight flickering.
 - 4) " :0" does not display when power is on.
2. A distinct change in the display are not on when the numbers are displayed.
3. One or more digits in the display are not on when they should be.
4. Display indicates a number different from one pressed.
5. Specific numbers (for example 2 or 3) will not display when the panel is pressed.
6. Display does not count down or up with time cooking or clock operation.
7. Oven is programmable and cooks normally but no display shows.
8. Display obviously jumps in time while counting down.
9. Display counts down noticeably too fast while cooking.
10. Display does not show the time of day when the STOP/CLEAR button is pushed. (in case of setting the present time)
11. Oven lamp and turntable motor do not stop although cooking is finished. Check if the RELAY 3 contacts close. If they close, replace P.C.B assembly.



NOTE

Before following the particular steps listed above in the troubleshooting guide for the failure of membrane keyboard, please check for the continuity of each wire-harness between the membrane keyboard and P.C.B. assembly.

MEASUREMENT AND TEST

1. MEASUREMENT OF THE MICROWAVE POWER OUTPUT

Microwave output power can be checked by indirectly measuring the temperature rise of a certain amount of water exposed to the microwave as directed below.

PROCEDURE

1. A cylindrical container of borosilicate glass is used for the test. It has a maximum thickness of 0.12", an external diameter of approximately 7.48" and a height of approximately 3.54".
The mass of the container is determined.
2. At the start of the test, the oven and the empty container are at ambient temperature. Water having an initial temperature of $10^{\circ}\text{C} \pm 1^{\circ}\text{C}$ is used for the test. The water temperature is measured immediately before it is poured into the container.
3. A quantity of $1000\text{g} \pm 5\text{g}$ of water is added to the container and its actual mass obtained.
The container is then immediately placed in the centre of the oven shelf, which is in its lowest normal position.
The oven is operated and the time for the water temperature to attain $20^{\circ}\text{C} \pm 2^{\circ}\text{C}$ is measured. The oven is then switched off and the final water temperature is measured within 60 seconds.

NOTE 1 - The water stirred is before its temperature is measured.

NOTE 2 - Stirring and measuring devices are to have a low heat capacity.

4. The microwave power output is calculated from the formula

$$P = \{4.187 \cdot m_w(T_2 - T_1) + 0.55 \cdot m_c (T_2 - T_0)\} / t$$

where

P is the microwave power output, in watts ;

m_w is the mass of the water, in grams ;

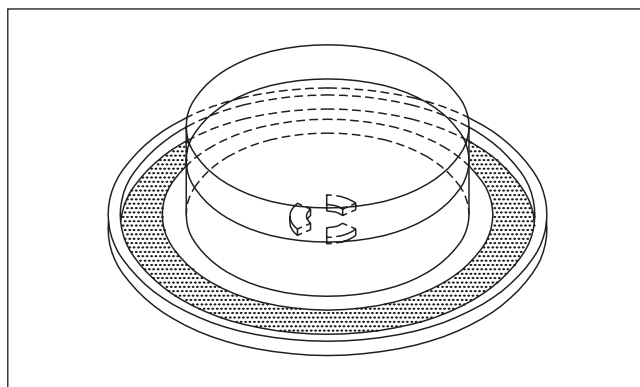
m_c is the mass of the container, in grams ;

T_0 is ambient temperature, in degrees Celsius ;

T_1 is the initial temperature of the water, in degree Celsius ;

T_2 is the final temperature of the water, in degrees Celsius ;

t is the heating time, in seconds, excluding the magnetron filament heating-up time.



CAUTION

1. Water load should be measured exactly to 1 liter (33.8 oz).
2. Input power voltage should be exactly specified voltage (Refer to SPECIFICATIONS).
3. Ambient temperature should be $20 \pm 2^{\circ}\text{C}$ ($68 \pm 3.6^{\circ}\text{F}$)

* Heating time for power output: ($T_2 = T_0$)

A (second)	70	64	60	56	52	49	47	44	42	40	38	36	35
B (W)	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200

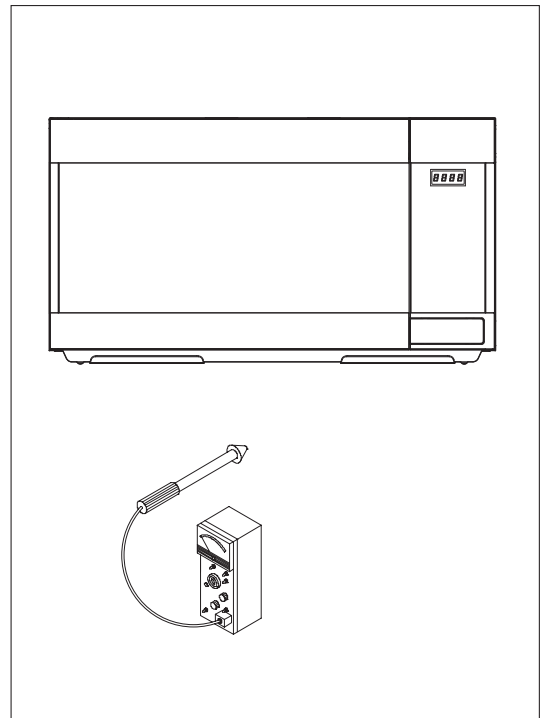
2. MICROWAVE RADIATION TEST

CAUTION :

1. Make sure to check the microwave leakage before and after repair of adjustment.
2. Always start measuring of an unknown field to assure safety for operating personnel from microwave energy.
3. Do not place your hands into any suspected microwave radiation field unless the safe density level is known.
4. Care should be taken not to place the eyes in direct line with the source of microwave energy.
5. Slowly approach the unit under test until the radiometer reads an appreciable microwave leakage from the unit under the test.

PROCEDURES

1. Prepare Microwave Energy Survey Meter, 600cc glass beaker, and glass thermometer 100°C(212°F).
2. Pour 275cc±15cc of tap water initially at 20±5°C(68±9°F) in the 600cc glass beaker with an inside diameter of approx. 85mm(3.35in.).
3. Place it at the center of the tray and set it in a cavity.
4. Close the door and operate the oven.
5. Measure the leakage by using Microwave Energy Survey Meter with dual ranges, set to 2450MHz.
 - 1) Measured radiation leakage must not exceed the value prescribed below. Leakage for a fully assembled oven with door normally closed must be less than 4mW/cm².
 - 2) When measuring the leakage, always use the 5cm(2in.) space cone with probe. Hold the probe perpendicular to the cabinet and door. Place the space cone of the probe on the door, cabinet, door seam, door viewing screen, the exhaust air vents and the suction air vents.
While testing for leakage around the door, pull the door away from the front of the oven as far as is permitted by the closed latch assembly.
 - 3) Measuring should be in a counter-clockwise direction at a rate of 1 in./sec. If the leakage of the cabinet door is unknown, move the probe more slowly.
 - 4) When measuring near a corner of the door, keep the probe perpendicular to the areas making sure the probe end at the base of the cone does not get closer than 2 in. from any metal. If not, erroneous reading may result.
 - 5) After servicing, record data on service invoice and/or microwave leakage report.



3. COMPONENT TEST PROCEDURE

- High voltage is present at the high voltage terminal of the high voltage transformer during any cooking cycle.
- It is neither necessary nor advisable to attempt measurement of the high voltage.
- Before touching any oven components or wiring, always unplug the oven from its power source and discharge the capacitor.

1. High voltage transformer

- (1) Remove connections from the transformer terminals and check continuity.
- (2) Normal readings should be as follows:
 - Secondary winding Approx. $90\ \Omega \pm 10\%$
 - Filament winding Approx. $0\ \Omega$
 - Primary winding Approx. $0.4\ \Omega$

2. High voltage capacitor

- (1) Check continuity of capacitor with meter on the highest OHM scale.
- (2) A normal capacitor will show continuity for a short time, and then indicate $10M\Omega$ once the capacitor is charged.
- (3) A shorted capacitor will show continuous continuity.
- (4) An open capacitor will show constant $10M\Omega$.
- (5) Resistance between each terminal and chassis should be infinite.

3. High voltage diode

- (1) Isolate the diode from the circuit by disconnecting the leads.
- (2) With the ohmmeter set on the highest resistance scale measure the resistance across the diode terminals.
 - Reverse the meter leads and again observe the resistance reading.
 - Meter with 6V, 9V or higher voltage batteries should be used to check the front-back resistance of the diode, otherwise an infinite resistance may be read in both directions.
 - A normal diode's resistance will be infinite in one direction and several hundred $K\Omega$ in the other direction.

4. Magnetron

For complete magnetron diagnosis, refer to "Measurement of the Microwave Power Output".

Continuity checks can only indicate an open filament or a shorted magnetron.

To diagnose for an open filament or a shorted magnetron.

- (1) Isolate magnetron from the circuit by disconnecting the leads.
- (2) A continuity check across magnetron filament terminals should indicate $0.1\ \Omega$ or less.
- (3) A continuity check between each filament terminal and magnetron case should read open.

5. Fuse

If the fuse in the primary and monitor switch circuit is blown when the door is opened, check the primary and monitor switch before replacing the blown fuse.

In case the fuse is blown by an improper switch operation, replace the defective switch and fuse at the same time.

Replace just the fuse if the switches operate normally.

6. Interlock switches

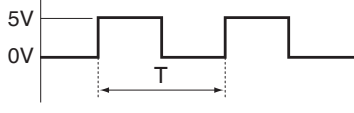
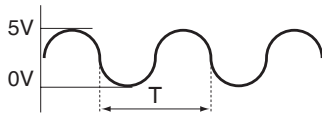
- (1) You can test continuity of safety interlock and monitor switch by using ohmmeter.
- (2) The switch operation is checked by zero/unlimited.
 - The meter should indicate zero resistance.
- (3) The sequence of check is interlock monitor switch, primary and secondary interlock switches check.

PRINTED CIRCUIT BOARD

1. CIRCUIT CHECK PROCEDURE

1. Voltage Check

- Key check point

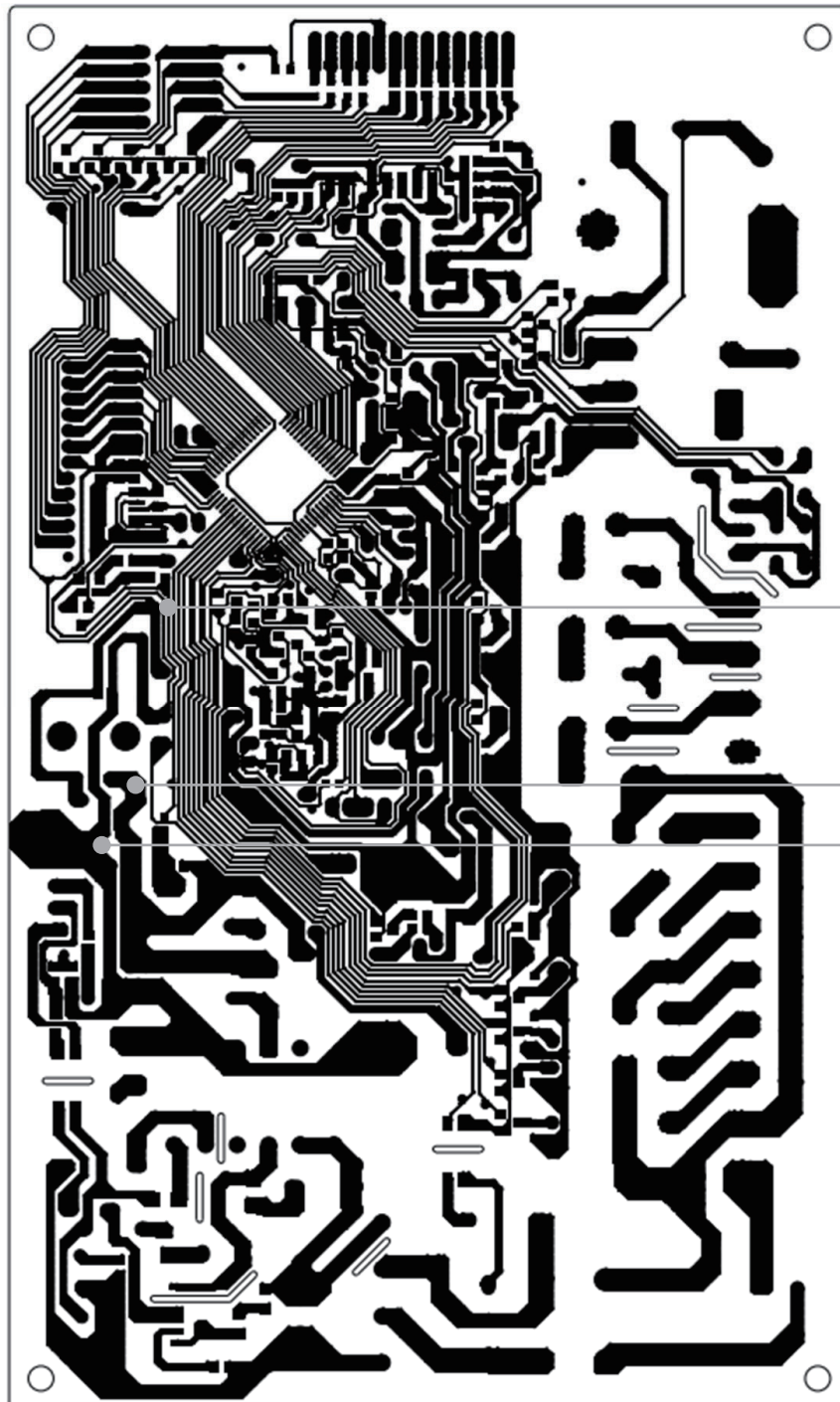
NO	CHECK POINT	REMARK
1	IC1 PIN 5	5VDC
2	IC1 PIN 8	 <p>T : 16.67ms(60Hz)</p>
3	IC1 PIN 35 OR PIN 36	 <p>T : 250ns(4MHz)</p>

- Check method

NO	MEASURE POINT	WAVE FORM	REMEDY	REMARK
1	MP1	DC 5V±0.25V	Replace VL1, C25, EC7,D29	NO LOAD
2	MP2	DC 15V±3.0V	Replace T1, D28, EC5, EC6, OP2, IC6, R71~R74, R80, R83	NO LOAD

NOTE

Each measure point must be measured with GND points.



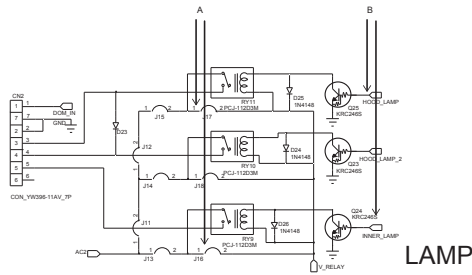
MP1

MP2

GND

3. When there is no microwave oscillation

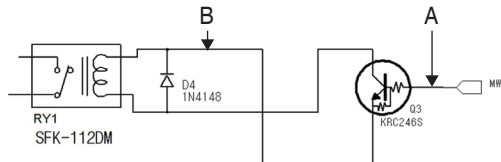
- 1) When pressing **START** pad, oven lamp does not turn on.
Fan motor do not rotate, but cook indicator in display comes on.



- Check method

STATE	POINT	A	B
RELAY 3 ON		5V	GND
RELAY 3 OFF		GND	12V

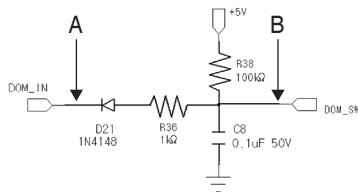
- 2) When pressing **START** pad, oven lamp turns on.
Fan motor and turntable rotate and cook indicator in display comes on.



- Check method

STATE	POINT	A	B
RELAY 1 ON		5V	GND
RELAY 1 OFF		GND	12V

4. When the door is opened during operation, the count down timer does not stop.



- Check method

STATE	POINT	A	B
1) DOOR OPEN		OPEN	5VDC
2) DOOR CLOSED		CLOSE	GND

CHECK NO	METHOD	REMEDY
1	Check the stage (ON, OFF) of the door open monitor switch by resistance measurement.	Replace door open monitor switch.

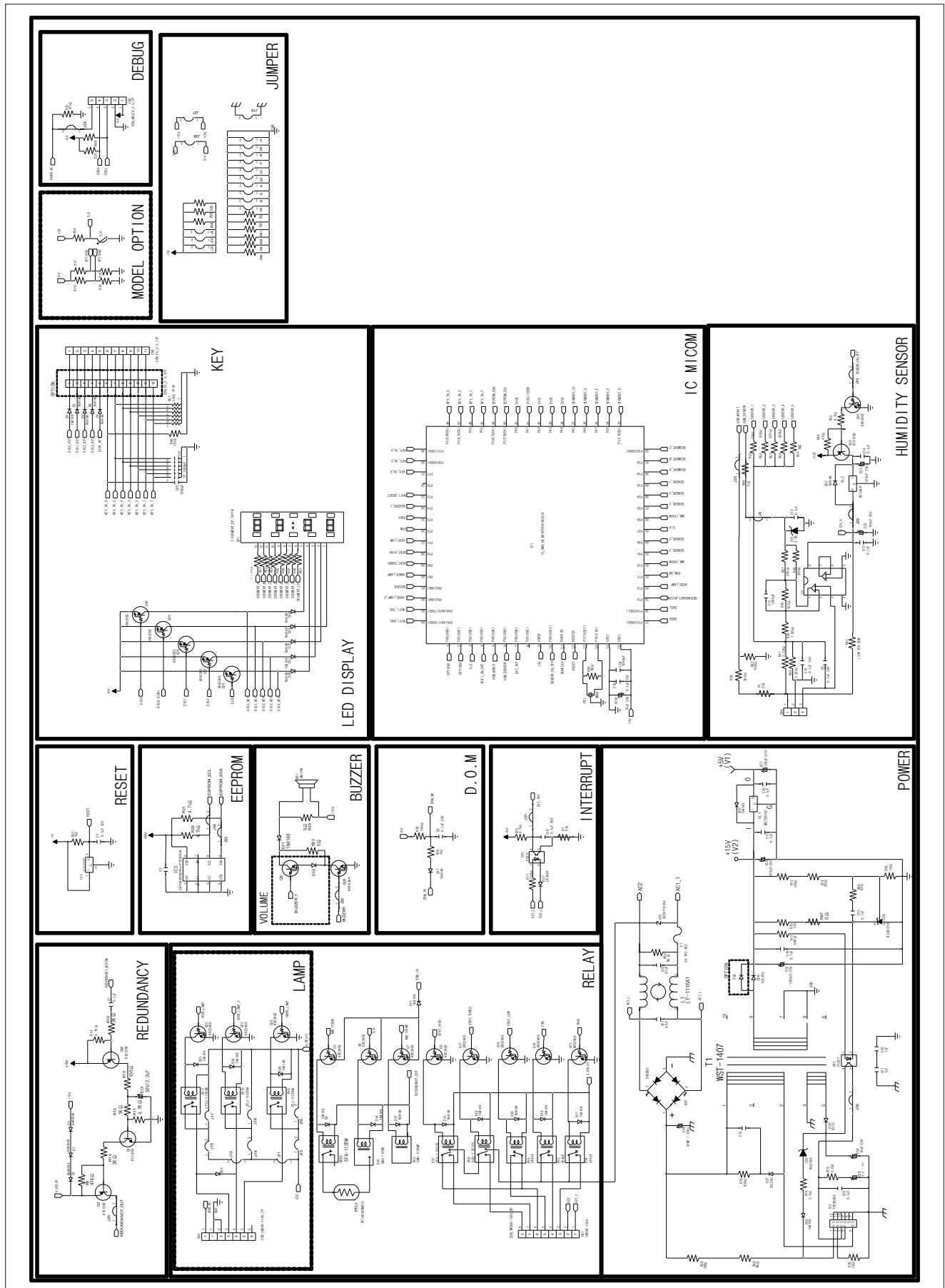
5. When the digital clock does not operate properly.

→ refer to Circuit Diagram

POINT	WAVE FORM
IC 1 PIN 8	

* If clock does not keep exact time, you must check resistor Q7, D7, C11, C13, R32 and R34.

2. PCB CIRCUIT DIAGRAM



3. PCB COMPONENT NO.

NO	PART NAME	SYMBOL	PART CODE	SPECIFICATION	Q'TY
1	LED DISPLAY	DP1	9KC40D05-0033700	DGD-D5812B-21	1
2	BUZZER	BZ1	9KC3515600100	BM-20K (BUJEON)	1
3	DIODE	BD1	9KCDD4SB80---	D4SB80 (7100)	1
4	C CHIP CERA	C1-2 C7-10 C12-14 C16-19 C25	9KCHCFK104ZCB	Y5V 50V 0.1MF Z 2012	14
5	C CERA	C15	9KCCCF3B102K	1KV 1000PF	1
7	C CHIP CERA	C20 C23	9KCHCBH104KCA	0.1MF 25V 2012 X7R K	2
8	C CERA AC	C22 C21	9KCCH1BEE102M	U/C/V 2.5KV 1000PF M	2
9	C CHIP CERA	C24 C11 C26	9KCHCBK102KCA	50V X7R 1000PF K 2012	3
10	CAPACITOR LINE ACROSS	XC1-2	9KC40C01-0036700	AC275V 0.47MF CMPP	2
11	C ELECTRO	EC1	9KCCEXE1H229A	50V RS 2.2MF (5X11) TP	1
12	C ELECTRO	EC2	9KCCEXF1E101V	25V RSS 100MF (6.3X11) TP	1
13	C ELECTRO	EC3	9KCCEXF1E471V	25V 470MF 10X12.5	1
14	CAPACITOR ELECTRO	EC4	9KCCEYE2H470D	500V RMU 47MF 105DEG (18X31.5)	1
15	CAPACITOR ELECTRO	EC5	9KCCEYF1E102F	25V GF 1000MF 12.5X20	1
16	CAPACITOR ELECTRO	EC6	9KCCEXF1E471C	25V RUS 470MF (10X16) TP	1
17	CAPACITOR ELECTRO	EC7	9KCCEXF1E101C	25V RUS 100MF (6.3X11) TP	1
18	CAPACITOR ELECTRO	EC8	9KCCEXF1E470C	47MF 25V (5X11) RUS TP	1
19	CAPACITOR ELECTRO	EC9 EC10	9KCCEXF1H100C	50V RUS 10MF (5X11) TP	2
20	CONN FILM	CN3	9KC441M367170	FCZ 254-11	1
21	CONN WAFER	CN4	9KC30166M503R	MOLEX 35312-0312 RED	1
22	CONN WAFER	CN2	9KC3519150800	YW396-11(2468)V	1
23	CONN WAFER	CN1	9KC65191-0016300	YW396-15AV	1
24	C ARRAY	CA1	9KCCN6XB-102M	7P(6) 1000PF M 50V 2.54MM	1
25	DIODE	D1-3	9KCDZN4004A--	KN4004A AUTO 52MM	3
26	DIODE	D4-9 D14-15 D21-22 D29 D35	9KCDZN4148---	1N4148 AUTO 52MM	12
27	DIODE CHIP	D17-20 D13 D11 D25-26 D30-34	9KC40D03-0016900	1N4148WS_L1SS355T1H	14
28	DIODE	D28	9KCDS3L20UP75	S3L20U(5002 P7.5MM)	1
29	DIODE	D27	9KCD1N4007SMD	1N4007 SMD, M7 DIODE	1
30	DIODE CHIP	D36	9KC40D03-0008800	ES1G 1A 400V SMD	1
31	DIODE	D37	9KCDUF4007---	UF4007 DO-41 1000V 1A	1
32	FUSE PLASTIC	F1	9KC5FWPR2022L	WIDE 250V 2A TR5 382 SERIES	1
33	TRANS SMPS	T1	9KC40512-0009700	WST-1407 (EE2519V)	1
34	IC OP AMP	IC4	9KC1CPLM358--	LM358 (S.S)	1
35	IC POWER	IC2	9KC40101-0026600	TOP265KG	1
36	IC MICOM	IC1	9KC40101-0045400	ABOV FLASH(MC97F66128LB14)	1
37	IC EEPROM	IC5	9KC40101-0002900	CAT24WC02W-TE13, 2K S-24CS02AFJ- TB-GE	1
38	WIRE COPPER	J1-10, J16, J17-35	9KC85801052GY	1/0.52 TIN COATING	35
39	FILTER LINE	L1	9KC5P1116103B	LF-1116A1	1
40	IC PHOTO COUPLER	OP1-2	9KC40101-0026200	PHOTO COUPLER(PC817_HUAJING)	2
41	THERMISTOR PTC	PTC1	9KCDP1390MK10	PP1AR390MK10	1
42	R CHIP	R1 R6 R8 R22 R81 R85	9KCHRFT000JCB	0 OHM 2012 (JUMPER)	6
43	R CHIP	R2 R3 R7 R48 R89 R87	9KC40H08-0044800	0 OHM 1/4 3216	6
44	R CHIP	R13	9KCHRFT101JCB	1/10 100 OHM J 2012	1
45	R CHIP	R14 R20-21 R55 R11	9KCHRFT472JCB	1/10W 4.7K OHM J 2012	5
46	R CHIP	R15 R10	9KC40H08-0010800	1/10W 2K J 2012, 1%	3
47	R CHIP	R38	9KCHRFT104JCB	1/10W 100K 2012	1
48	R CHIP	R39	9KC40H08-0044100	1/10W 301K 2012, 1%	1
49	R CHIP	R40-41	9KC40H08-0044000	1/10W 3.32K 2012, 1%	2
50	R CHIP	R42	9KC40H08-0042900	1/10W 150K 2012, 1%	1
51	R CARBON FILM	R43	9KCRD-2Z201J-	1/2 200 OHM J	1
52	R CHIP	R44	9KC40H08-0044300	1/10W 1.82K 2012 1%	1

PCB COMPONENT NO.

NO	PART NAME	SYMBOL	PART CODE	SPECIFICATION	Q'TY
53	R CHIP	R45	9KC40H08-0043900	1/10W 357K 2012, 1%	1
54	R CHIP	R46-47	9KC40H08-0044500	1/10W 200 2012, J	2
55	R CHIP	R9 R49 R25	9KCHRFT473JCB	1/10W 47K OHM J 2012	3
56	R CHIP	R51	9KC40H08-0044100	1/10W 301K 2012, 1%	1
57	R CHIP	R52	9KC40H08-0042900	1/10W 150K 2012, 1%	1
58	R CHIP	R53	9KC40H08-0044400	1/10W 75K 2012, 1%	1
59	R CHIP	R54	9KCHRFT105JCB	1/10W 1M OHM J 2012	1
60	R CHIP	R23 R36	9KCHRFT102JCB	1/10W 1K OHM J 2012	2
61	R CARBON FILM	R18 R19 R24	9KCRD-AZ102J-	1/6 1K OHM J	3
62	R CHIP	R37	9KC40H08-0000700	1/4W 1K OHM J 3216	1
63	R CHIP	R59 R69	9KC40H08-0020400	2M OHM 1/4W 3216	2
64	R CHIP	R61-68	9KCHRFT471JCB	1/10 470 OHM J 2012	8
65	R CARBON FILM	R60	9KC40R01-0001300	1/2 1M OHM J	1
66	RESISTOR M-OXIDE FILM	R70	9KC40R01-0026900	1W 100K OHM J	1
67	RESISTOR METAL FILM	R71	9KCRN-4Z681F-	1/4 680 OHM F	1
68	R METAL FILM	R72	9KCRN-4Y102F-	1/4 1K OHM F	1
69	R METAL FILM	R73	9KCRN-4K303F-	30K OH 1/4W F	1
70	R CHIP	R74	9KCHRFT203JCB	1/10W 20K OHM J 2012	1
71	R CHIP	R75	9KCHRFT472JCB	1/10W 4.7K OHM J 2012	1
72	R CHIP	R76	9KCHR8512JEA	5.1K OHM 1/8W 3216 J	1
73	R CARBON FILM	R77	9KCRS01F104J-	1W 100K OHM J	1
74	R CHIP	R78	9KCHRFT123J1P	1/10W 12K OHM J 2012	1
75	R CHIP	R79	9KCHRFT6R8JCB	1/10W 6.8 OHM J 2012	1
76	R CHIP	R80 R83 R88	9KCHRFT103JCB	1/10W 10K OHM J 2012	3
77	R CHIP	R82	9KCHRFT105JCB	1/10W 1M OHM J 2012	1
78	R CHIP	R50	9KC40H08-0044200	1/10W 604K 2012, 1%	1
79	R CHIP	R26-27	9KCHRFT103J1P	1/10W 10K OHM J 2012, 1%	2
80	R CHIP	R12	9KCHRFT102JCB	1/10W 1K OHM J 2012	1
81	IC REGULATOR	IC8	9KC1KA431AZ--	KA431AZ 1% TO-92 IC REGULATOR	1
82	IC REGULATOR	VL1	9KC1CPMC7805C	MC7805C(S/S)	1
83	IC REGULATOR	VL2	9KC1K1A7812AP	KIA7812AP	1
84	SW RELAY	RY1	9KC5SC0101171	SFK-112DM	1
85	SW RELAY	RY4-6 RY9,RY11	9KC5SC0101350	PCJ-112D3M	5
86	SW RELAY	RY2	9KC5SC0101121	G5G-1A 1C 1P DC12V	1
87	SW RELAY	RY7-8	9KC5SC0101906	G5Q-1 DC12V	2
88	IC RESET	IC3	9KC1K1A7033AP	KIA7033AP	1
89	RESONATOR CERA	CR1	9KC40508-0000700	CSTLS8M00G53-BO	1
90	R ARRAY	RA1	9KCRA-87X103J	7P(6) 1/4 10K OHM J	1
91	TR CHIP	Q3 Q6,Q8-9 Q15-18 Q20 Q24-25	9KC40H09-0000700	KRC246S	12
92	TR CHIP	Q26-30	9KCTKTRC226SB	KRA226S	7
93	TR	Q19	9KCTZTA1266Y-	KTA1266Y- (2SA1980NYATPF)	1
94	TR CHIP	Q2	9KC40H09-0000200	KTC3265-Y	1
95	TR CHIP	Q1 Q4	9KCTKTA1298YB	KTA1298Y	2
96	VARIATOR	VS1	9KCDVC471D14	SVC471D14A(BULK)	1
97	DIODE ZENER	ZD1	9KCDZUZ4R7BSB	MTZ J 4.7B	1
98	DIODE ZENER	ZD2	9KC40D03-0009200	1N5254B (0.5W / 27V / DO-41)	1
99	BOARD	MWO PCB BOARD	9KC40303-0114400	M381(CEM)	1

EXPLODED VIEW AND PARTS LIST

1. DOOR ASSEMBLY

Refer to Disassembly and assembly.

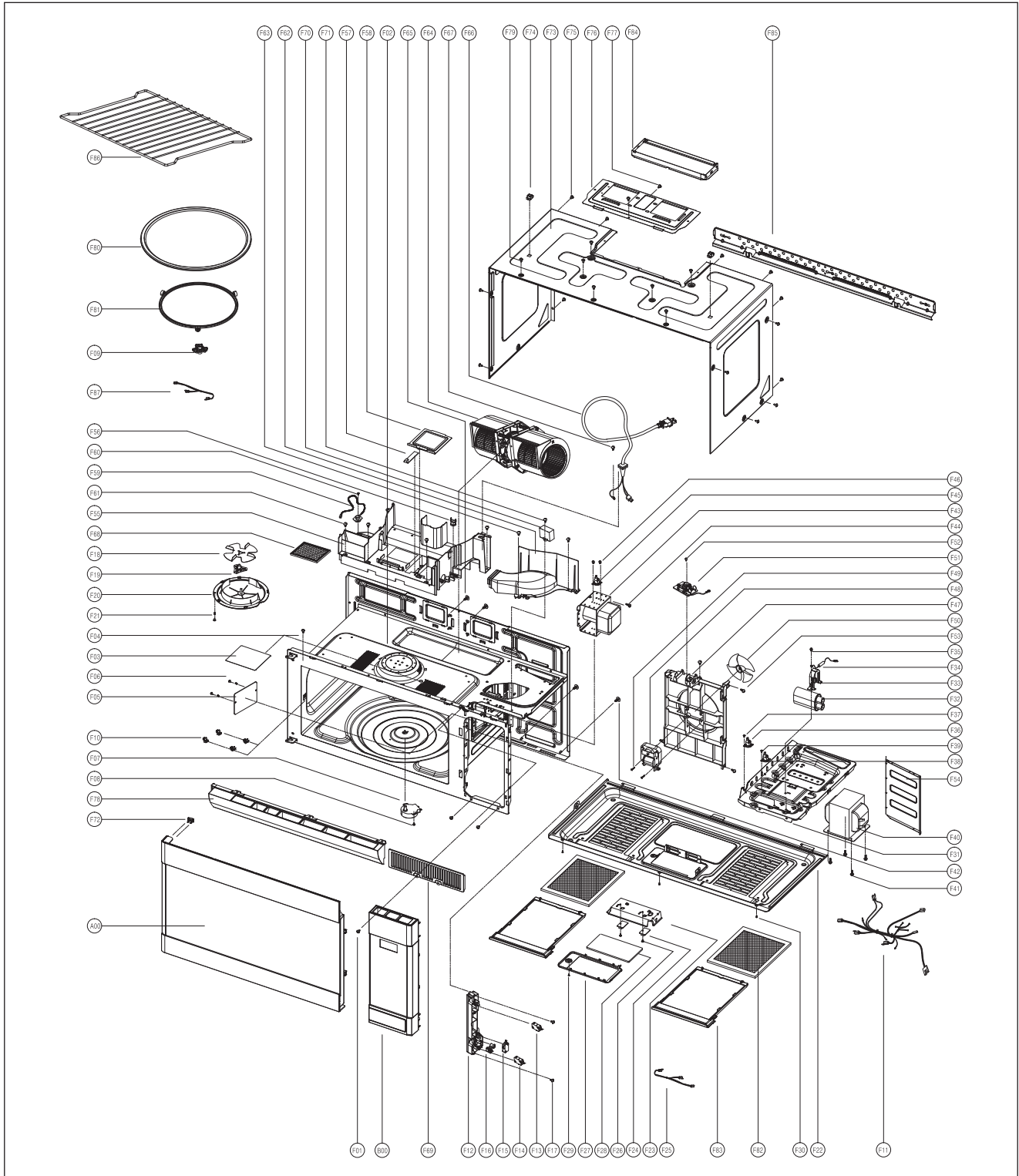
2. CONTROL PANEL ASSEMBLY

Refer to Disassembly and assembly.

3. GUIDE WIND ASSEMBLY

Refer to Disassembly and assembly.

4. TOTAL ASSEMBLY



NO	PART CODE	PART NAME	Q'TY	REMARK
A00	9KC35117-0052000	DOOR AS	1	
B00	9KC35167-0111900	CONTROL-PANEL AS	1	
F01	9KC7122401211	SCREW TAPPING	1	
F02	9KC35161-0026700	CAVITY AS	1	
F03	9KC35114-0013000	COVER LAMP	1	
F04	9KC7122401211	SCREW TAPPING	1	
F05	9KC3511416700	COVER WAVE GUIDE	1	
F06	9KC4414H50000	FIXTURE AS	1	
F07	9KC3966820200	MOTOR SYNCRO	1	
F08	9KC7121400611	SCREW TAPPING	1	
F09	9KC3517400620	COUPLER	1	
F10	9KC35125-0009101	GUIDE TRAY RACK	4	
F11	9KC65127-0026200	HARNESS MAIN	1	
F12	9KC35138-0031700	LOCK	1	
F13	9KC65185-0000800	SW MICRO	1	
F14	9KC4415A66600	SW MICRO	1	
F15	9KC3518571000	SWITCH PUSH	1	
F16	9KC35137-0003000	LEVER LOCK	1	
F17	9KC7122401211	SCREW TAPPING	2	
F18	9KC35171-0001200	STIRRER BLADE	1	
F19	9KC35174-0002800	COUPLER STIRRER BLADE	1	
F20	9KC35114-0012700	COVER STIRRER BLADE	1	
F21	9KC4414H50000	FIXTURE AS	1	
F22	9KC35145-0001300	PLATE *B PAINTING AS	1	
F23	9KC35106-0009100	BRACKET LED	1	
F24	9KC65136-0001400	LAMP PCB LED AS	2	
F25	9KC65127-0026600	HARNESS LAMP	1	
F26	9KC7121300611	SCREW TAPPING	2	
F27	9KC35106-0009400	BRACKET LAMP COVER PAINTING AS	1	
F28	9KC35114-0012900	COVER LAMP	1	
F29	9KC7S312X40A2	SCREW SPECIAL	1	
F30	9KC7122401211	SCREW TAPPING	3	
F31	9KC35103-0016300	BASE *R	1	
F32	9KC3518302201	CAPACITOR HV	1	
F33	9KC35130-0000802	HOLDER HV CAPACITOR	1	
F34	9KC3518402100	DIODE HV AS	1	
F35	9KC3516008100	SPECIAL SCREW	1	
F36	9KC651890-007301	THERMOSTAT	1	
F37	9KC7121400611	SCREW TAPPING	1	
F38	9KC651890-007400	THERMOSTAT	1	
F39	9KC7121400611	SCREW TAPPING	1	
F40	9KC65181-0017000	TRANS HV	1	
F41	9KC3516008100	SPECIAL SCREW	4	
F42	9KC7122401211	SCREW TAPPING	4	
F43	9KC3518003900	MAGNETRON	1	
F44	9KC3516004000	SCREW SPECIAL	1	

NO	PART CODE	PART NAME	Q'TY	REMARK
F45	9KC3518901400	THERMOSTAT	1	
F46	9KC7121300611	SCREW TAPPING	2	
F47	9KC35125-0024100	GUIDE WIND	1	
F48	9KC3963822200	MOTOR SHADED POLE	1	
F49	9KC7121402511	SCREW TAPPING	2	
F50	9KC3511800100	COOLING FAN BLADE	1	
F51	9KC3518608000	NOISE-FILTER	1	
F52	9KC7S312X40A1	SCREW SPECIAL	1	
F53	9KC7122401211	SCREW TAPPING	3	
F54	9KC35125-0024200	GUIDE AIR OUTLET *U	1	
F55	9KC35125-0023900	GUIDE AIR *T	1	
F56	9KC65189-0007200	THERMOSTAT	1	
F57	9KC65136-0001500	LAMP PCB LED AS	1	
F58	9KC35114-0012500	COVER CAVITY LAMP	1	
F59	9KC3514801300	SENSOR HUMIDITY	1	
F60	9KC7121300611	SCREW TAPPING	1	
F61	9KC7122401211	SCREW TAPPING	4	
F62	9KC35125-0024300	GUIDE AIR STIRRER	1	
F63	9KC7122401211	SCREW TAPPING	2	
F64	9KC65159-0009900	HOOD FAN MOTOR	1	
F65	9KC7122401211	SCREW TAPPING	2	
F66	9KC65113-0010600	CORD POWER AS	1	
F67	9KC3516008100	SPECIAL SCREW	2	
F68	9KC35119-0000700	FILTER CHARCOAL	1	
F69	9KC35175-0007100	PROTECTOR WIRE	1	
F70	9KC65183-0004300	CAPACITOR RUNNING	1	
F71	9KC7122401211	SCREW TAPPING	1	
F72	9KC351520005300	STOPPER DOOR	1	
F73	9KC35108-0015800	CABINET AS	1	
F74	9KC35100-0003900	ASSY NUT	2	
F75	9KC7122401211	SCREW TAPPING	17	
F76	9KC35114-0012600	COVER MOTOR CONDENSOR	1	
F77	9KC7122401211	SCREW TAPPING	3	
F78	9KC35124-0000800	GRILLE AIR	1	
F79	9KC7122401211	SCREW TAPPING	3	
F80	9KC441X335A10	TRAY GLASS	1	
F81	9KC3512512930	GUIDE ROLLER AS	1	
F82	9KC35119-0000800	FILTER AIR	1	
F83	9KC35126-0012500	HANDLE FILTER AIR	2	
F84	9KC3515400500	VALVE DAMPER AS	1	
F85	9KC35106-0009300	BRACKET RANGE MOUNT	1	
F86	9KC35172-0013400	METAL RACK	1	
F87	9KC65127-002630	HARNES THERMOSTAT	1	

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