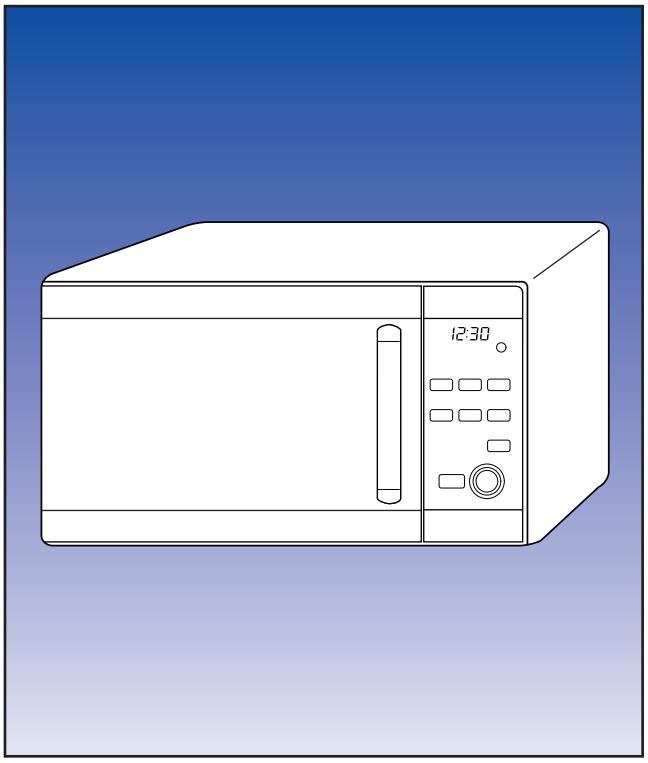
MICROWAVE OVEN

BASIC : GE87W
MODEL : MW87W-S
MODEL CODE : MW87W-S/XEG

SERVICE Manual

MICROWAVE OVEN



FEATURES

1. Cost Reduction for 0.8 cu.ft of Volume

2. Competitive Price

Refer to the service manual in the itself (http://itself.sec.samsung.co.kr/) for the more information.

Contents

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.

1. Precaution

Follow these special safety precautions. Although the microwave oven is completely safe during ordinary use, repair work can be extremely hazardous due to possible exposure to microwave radiation, as well as potentially lethal high voltages and currents.

1-1 Safety precautions (⚠)

1. All repairs should be done in accordance with the procedures described in this manual. This product complies with Federal Performance Standard 21 CFR Subchapter J(DHHS).

2. Microwave emission check should be performed to prior to servicing if the oven is operative.

3. If the oven operates with the door open :
   Instruct the user not to operate the oven and contact the manufacturer and the center for devices and radiological health immediately.

4. Notify the Central Service Center if the microwave leakage exceeds 5 mW/cm^2.

5. Check all grounds.

6. Do not power the MWO from a “2-prong” AC cord. Be sure that all of the built-in protective devices are replaced. Restore any missing protective shields.

7. When reinstalling the chassis and its assemblies, be sure to restore all protective devices, including: nonmetallic control knobs and compartment covers.

8. Make sure that there are no cabinet openings through which people --particularly children --might insert objects and contact dangerous voltages. Examples: Lamp hole, ventilation slots.

9. Inform the manufacturer of any oven found to have emission in excess of 5 mW/cm^2, Make repairs to bring the unit into compliance at no cost to owner and try to determine cause. Instruct owner not to use oven until it has been brought into compliance.

   CENTRAL SERVICE CENTER

10. Service technicians should remove their watches while repairing an MWO.

11. To avoid any possible radiation hazard, replace parts in accordance with the wiring diagram. Also, use only the exact replacements for the following parts: Primary and secondary interlock switches, interlock monitor switch.

12. If the fuse is blown by the Interlock Monitor Switch: Replace all of the following at the same time: Primary, door sensing switch and power relay, as well as the Interlock Monitor Switch. The correct adjustment of these switches is described elsewhere in this manual. Make sure that the fuse has the correct rating for the particular model being repaired.

13. Design Alteration Warning:
    Use exact replacement parts only, i.e., only those that are specified in the drawings and parts lists of this manual. This is especially important for the Interlock switches, described above. Never alter or add to the mechanical or electrical design of the MWO. Any design changes or additions will void the manufacturer’s warranty. Always unplug the unit’s AC power cord from the AC power source before attempting to remove or reinstall any component or assembly.

14. Never defeat any of the B+ voltage interlocks. Do not apply AC power to the unit (or any of its assemblies) unless all solid-state heat sinks are correctly installed.

15. Some semiconductor (“solid state”) devices are easily damaged by static electricity. Such components are called Electrostatically Sensitive Devices (ESDs). Examples include integrated circuits and field -effect transistors. Immediately before handling any semiconductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground.

16. Always connect a test instrument’s ground lead to the instrument chassis ground before connecting the positive lead; always remove the instrument’s ground lead last.

1-2 Special Servicing Precautions (Continued)

17. When checking the continuity of the witches or transformer, always make sure that the power is OFF, and one of the lead wires is disconnected.

18. Components that are critical for safety are indicated in the circuit diagram by shading, ⚠ or ⚠ .

19. Use replacement components that have the same ratings, especially for flame resistance and dielectric strength specifications. A replacement part that does not have the same safety characteristics as the original might create shock, fire or other hazards.

NOTE : Connect the oven to a 20A. When connecting the oven to a 15A, make sure that circuit breaker can operate.

1-3 Special High Voltage Precautions

1. High Voltage Warning
   Do not attempt to measure any of the high voltages --this includes the filament voltage of the magnetron. High voltage is present during any cook cycle.
   Before touching any components or wiring, always unplug the oven and discharge the high voltage capacitor (See Figure 1-1)

2. The high-voltage capacitor remains charged about 30 seconds after disconnection. Short the negative terminal of the high-voltage capacitor to to the oven chassis. (Use a screwdriver.)

3. High voltage is maintained within specified limits by close-tolerance, safety-related components and adjustments. If the high voltage exceeds the specified limits, check each of the special components.

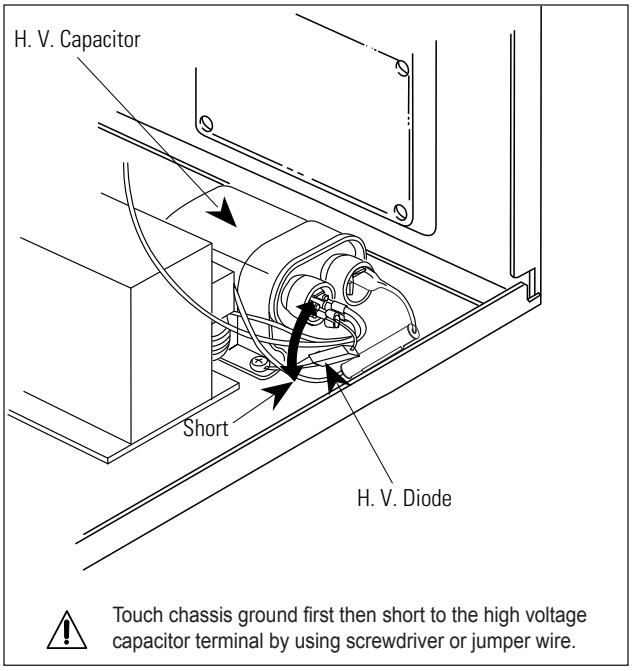


Fig. 1-1 Discharging High Voltage Capacitor

PRECAUTION

There exists HIGH VOLTAGE ELECTRICITY with high current capabilities in the circuits of the HIGH VOLTAGE TRANSFORMER secondary and filament terminals. It is extremely dangerous to work on or near these circuits with the oven energized.

DO NOT measure the voltage in the high voltage circuit including filament voltage of magnetron.

PRECAUTION

Never touch any circuit wiring with your hand nor with uninsulated tool during operation.

PRECAUTION

Servicemen should remove their watches whenever working close to or replacing the magnetron.

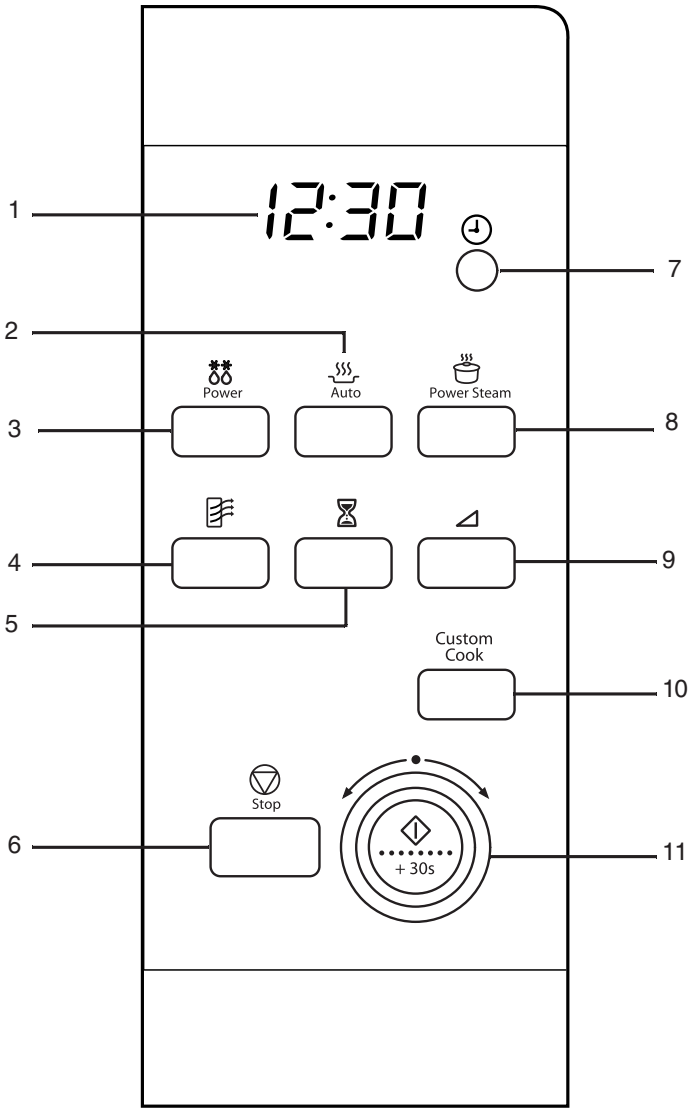
2. Product Specifications & Comparison Charts

2-1 Table of Specifications

Items		NEW MODEL (MW87W)	BASIC MODEL (GE87W)
Function	Capacity	0.8 cu.ft. (23 Liter)	0.8 cu.ft. (23 Liter)
	Cavity Dimension (W X H X D)	W330 X H211 X D329	W330 X H211 X D329
	Outside Dimension (W X H X D)	W489 X H275 X D401.5	W489 X H275 X D406.5
	M/W Distribution	Turntable	Turntable
	Door Open Mehtod	Handle	Handle
	Oven Tray	Glass, 288mm	Glass, 288mm
	Oven Material	Enamel	Enamel
	Cavity Structure	4 Pieces	4 Pieces
	Control Mehtod	Tact	Tact
	Power Level	6 Level	6 Level
	Weight(Net)	13.5kg	13.5kg
	Weight(Gross)	15kg	16.5kg
	Loading Q'ty(40ft)	737(Sets / 40ft)	737(Sets / 40ft)
General	Input Voltage	230V	230V
	Input Hertz	50Hz	50Hz
	Input Power	1250	1300
	High frequency Level	850W	850W
	Cooking Time	99'	99'
	high frequency Feedingt	Side	Side
	Auto Reheat	4	4
	Auto Defrost	4	4
	Auto Crusty Cook	4	4
	Aqua Clean	No	Yes

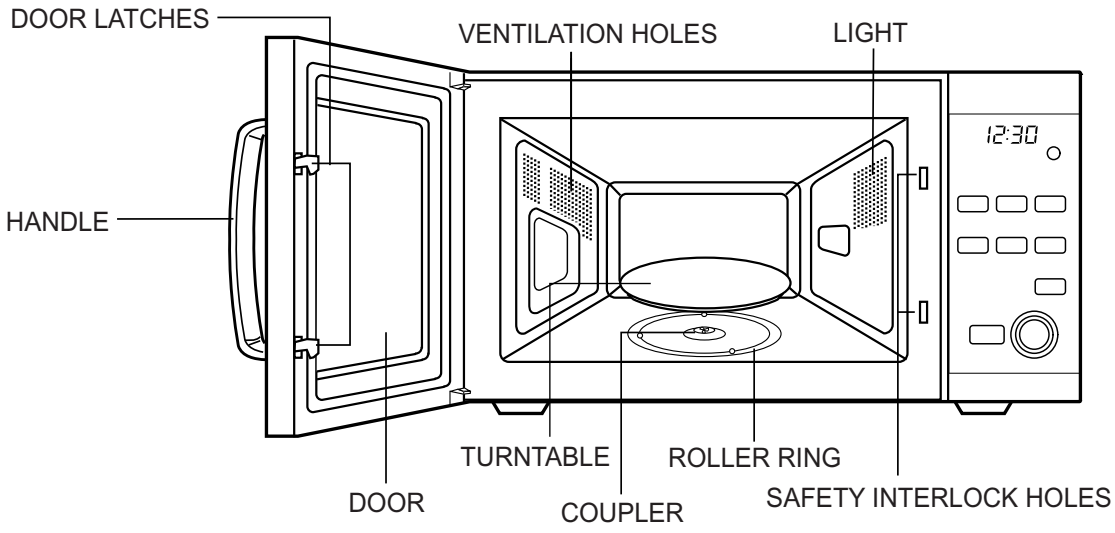
3. Operating Instructions

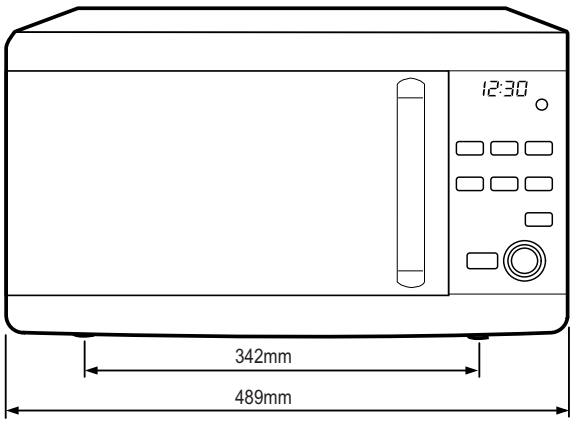
3-1 Control Panel

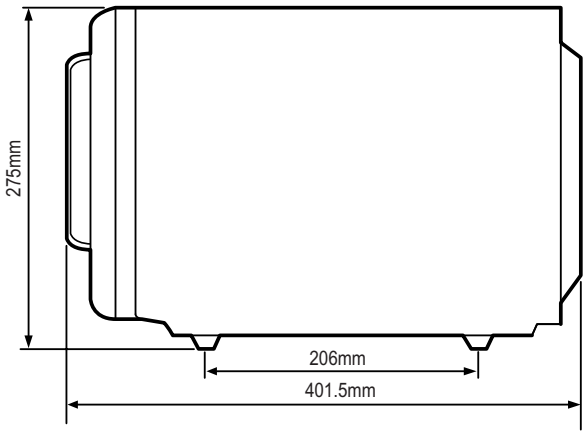


1. **DISPLAY**
2. **AUTO REHEAT SELECTION**
3. **AUTO POWER DEFROST BUTTON**
4. **DEODORIZATION BUTTON**
5. **STANDING TIME SETTING**
6. **STOP/CANCEL BUTTON**
7. **CLOCK SETTING**
8. **POWER STEAM SELECTION**
9. **POWER LEVEL SETTING**
10. **CUSTOM COOK BUTTON**
11. **START BUTTON/ DIAL KNOB (cook time, weight and serving size)**

3-2 Features & External Views



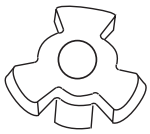
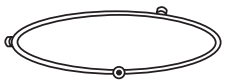
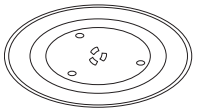




3. Operating Instructions

3-3 Accessory

Depending on the model that you have purchased, you are supplied with several accessories that can be used in a variety of ways.

	Description	Code No.	Q'ty
	**Coupler**	DE68-00140A	1
	**Roller ring**	DE97-00193B	1
	**Turntable**	DE74-20102E	1

4. Disassembly and Reassembly

4-1 Replacement of Magnetron, Motor Assembly and Lamp

Remove the magnetron including the shield case, permanent magnet, choke coils and capacitors (all of which are contained in one assembly).

1. Disconnect all lead wires from the magnetron and lamp.
2. Remove a screw securing air cover.
3. Remove the air cover.
4. Remove screws securing the magnetron to the wave guide.
5. Take out the magnetron very carefully.
6. Remove nuts from the back panel.
7. Take out the fan motor.
8. Remove the oven lamp by rotating to pull out from hole of air cover.

NOTE 1: When removing the magnetron, make sure that its antenna does not hit any adjacent parts, or it may be damaged.

NOTE 2: When replacing the magnetron, be sure to remount the magnetron gasket in the correct position and make sure the gasket is in good condition.

4-2 Replacement of High Voltage Transformer

1. Discharge the high voltage capacitor.
2. Disconnect all the leads.
3. Remove the mounting bolts.
4. Reconnect the leads correctly and firmly.

PRECAUTION

Servicemen should remove their watches whenever working close to or replacing the magnetron.

PRECAUTION

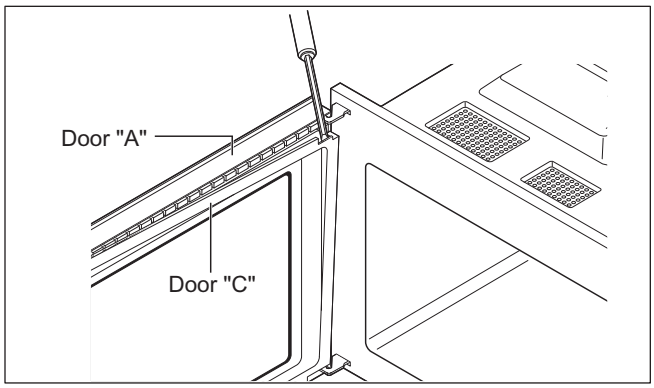
There exists HIGH VOLTAGE ELECTRICITY with high current capabilities in the circuits of the HIGH VOLTAGE TRANSFORMER secondary and filament terminals. It is extremely dangerous to work on or near these circuits with the oven energized.

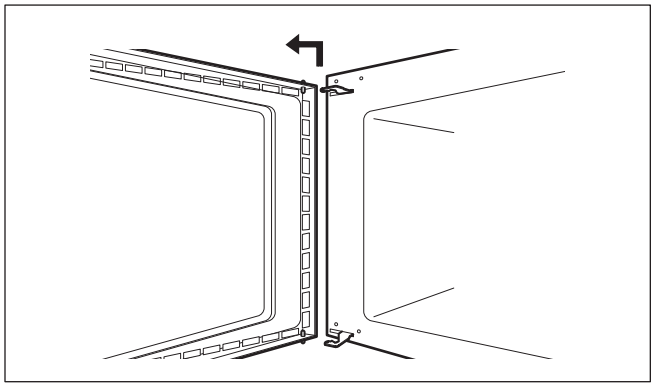
DO NOT measure the voltage in the high voltage circuit including filament voltage of magnetron.

4-3 Replacement of Door Assembly

4-3-1 Removal of Door “C”

Insert flat screwdriver into the gap between Door “A” and Door “C” to remove Door “C”. Be careful when handling Door “C” because it is fragile. Then remove the door assembly.

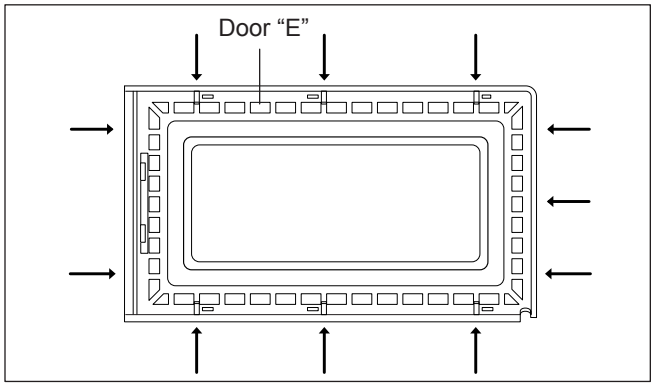




4-3-2 Removal of Door “E”

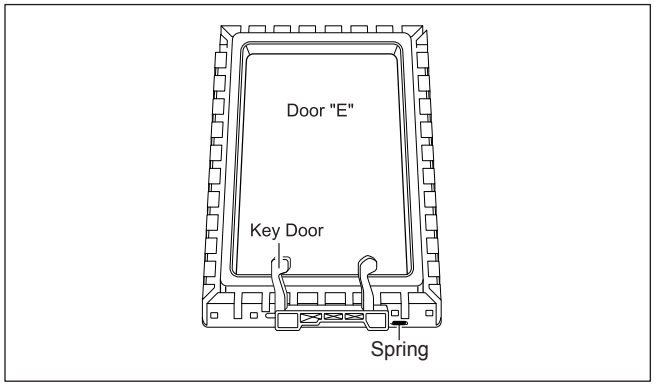
Following the procedure as shown in the figure, insert and bend a thin metal plate between Door “E” and Door “A” until you hear the ‘tick’ sound.

- Insertion depth of the thin metal plate should be 0.5mm or less.



4-3-3 Removal of Key Door & Spring

Remove pin hinge from Door “E”
Detach spring from Door “E” and key door



4-3-4 Reassembly Test

After replacement of the defective component parts of the door, reassemble it and follow the instructions below for proper installation and adjustment so as to prevent an excessive microwave leakage.

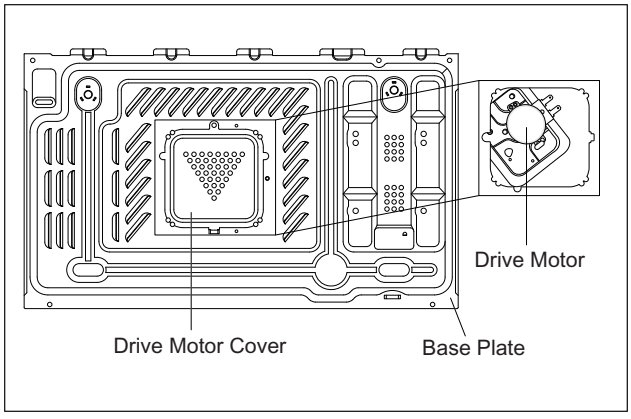
1. When mounting the door to the oven, be sure to adjust the door parallel to the bottom line of the oven face plate by moving the upper hinge and lower hinge in the direction necessary for proper alignment.
2. Adjust so that the door has no play between the inner door surface and oven front surface. If the door assembly is not mounted properly, microwave energy may leak from the space between the door and oven.
3. Do the microwave leakage test.

4-4 Replacement of Fuse

1. Disconnect the oven from the power source.
2. When 12A fuse blows out by the operation of interlock monitor switch failure, replace the primary interlock switch, door sensing switch, monitor switch and power relay.
3. When the above three switches operate properly, check if any other part such as the control circuit board, blower motor or high voltage transformer is defective.

4-5 Replacement of Drive Motor

1. Take out the glass tray, guide roller from oven cavity, disconnect power.
2. Remove turn table motor cover from case bottom.
   CAUTION : Remove sharp edge after cover removal.
3. Disconnect leads from motor.
4. Remove the screws securing motor to bottom of over cavity and lift out the motor.
5. When replacing the motor, be sure to remount it in the correct position.
   NOTE : The shaft of motor should fit tip coupler.
6. Screw the motor to bottom of oven cavity.
7. Connect leads to the drive motor.
8. Screw the drive motor cover to the base plate with a screw driver.
   NOTE : Bring the spare screw from service center.



COVER FIXING SCREW :
MACHINE SCREW(6006-001170)

4-6 Replacement of Control Circuit Board

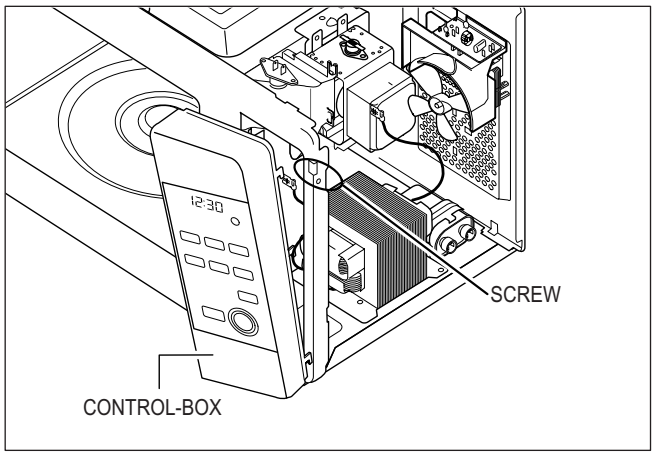
4-6-1 Removal of Control Box

1. Be sure to ground any static electric charge in your body and never touch the control circuit.

2. Disconnect the connectors from the control circuit board.

3. Remove screws securing the control box assembly.

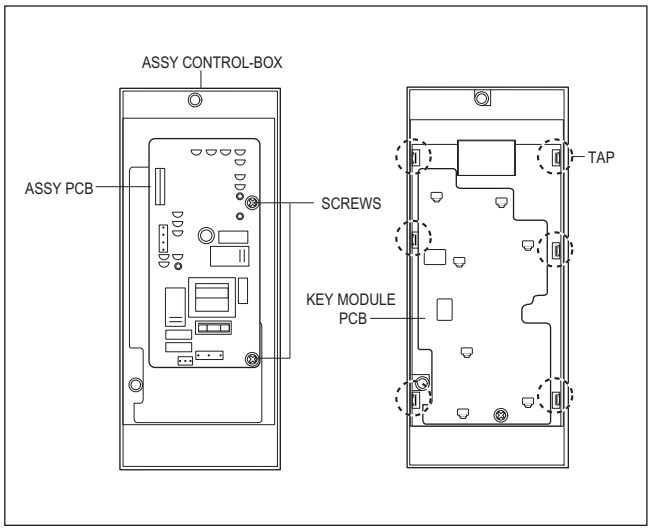
4. Remove the screw securing the ground tail of the keyboard.



4-6-2 Removal of Ass'y P.C.B

1. Remove screws securing the control circuit board.

2. Lift up the control circuit board from the Ass'y control box.



4-6-3 Removal of Key Module

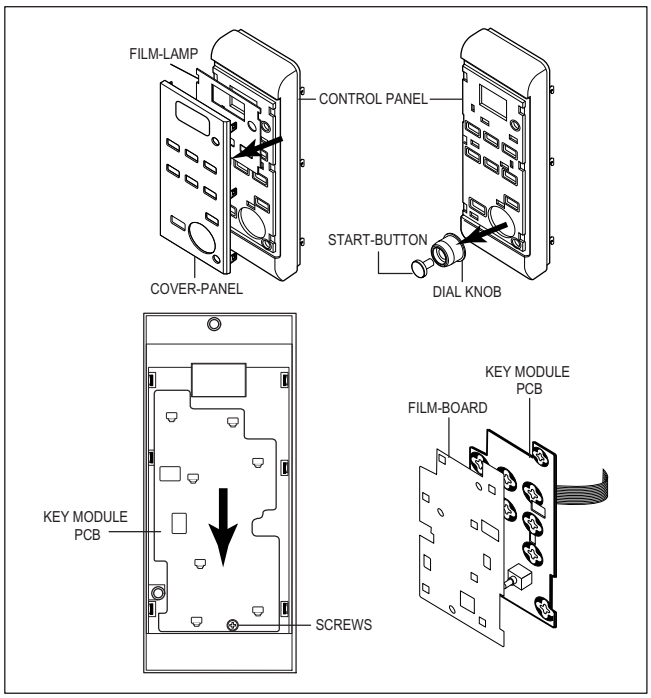
1. First, Remove the Assy PCB.
   Next, removing the Cover panel tap (6 pieces) in the Assy Control Box, and then remove the Cover Panel and Film Lamp.

2. Remove Start button and Dial knob in the Key Module PCB.

3. Remove screw (1 piece) under a key Module PCB.

4. Lift out key Module PCB to the underside from the control panel.

5. Remove Film-board from key Module PCB.



5. Alignment and Adjustments

PRECAUTION

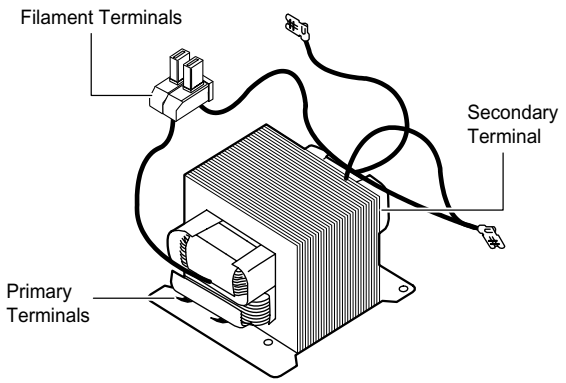
1. High voltage is present at the high voltage terminals during any cook cycle.
2. It is neither necessary nor advisable to attempt measurement of the high voltage.
3. Before touching any oven components or wiring, always unplug the oven from its power source and discharge the high voltage capacitor.

5-1 High Voltage Transformer

1. Remove connectors from the transformer terminals and check continuity.
2. Normal resistance readings are as follows:

Secondary	Approx. 171Ω
Filament	Approx. 0Ω
Primary	Approx. 2.3Ω

(Room temperature = 20°C)

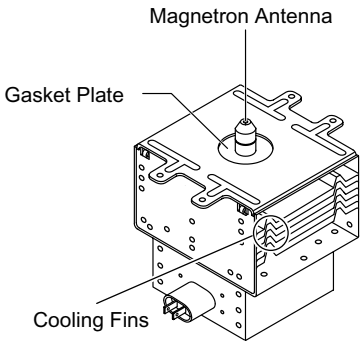


5-2 Low Voltage Transformer

1. The low voltage transformer is located on the control circuit board.
2. Remove the low voltage transformer from the PCB Ass'y and check continuity.
3. Normal resistor reading is shown in the table.

5-3 Magnetron

1. Continuity checks can indicate only an open filament or a shorted magnetron. To diagnose an open filament or shorted magnetron :
2. Isolate the magnetron from the circuit by disconnecting its leads.
3. A continuity check across the magnetron filament terminals should indicate one ohm or less.
4. A continuity check between each filament terminal and magnetron case should read open.



5-4 High Voltage Capacitor

1. Check continuity of the capacitor with the meter set at the highest resistance scale.
2. Once the capacitor is charged, a normal capacitor shows continuity for a short time, and then indicates 9M.
3. A shorted capacitor will show continuous continuity.
4. An open capacitor will show constant 9MΩ.
5. Resistance between each terminal and chassis should read infinite.

5-5 High Voltage Diode

1. Isolate the diode from the circuit by disconnecting its leads.
2. With the ohm-meter set at the highest resistance scale, measure across the diode terminals. Reverse the meter leads and read the resistance. A meter with 6V, 9V or higher voltage batteries should be used to check the front-to back resistance of the diode (otherwise an infinite resistance may be read in both directions). The resistance of a normal diode will be infinite in one direction and several hundred KΩ in the other direction.

5-6 Main Relay and Power Control Relay

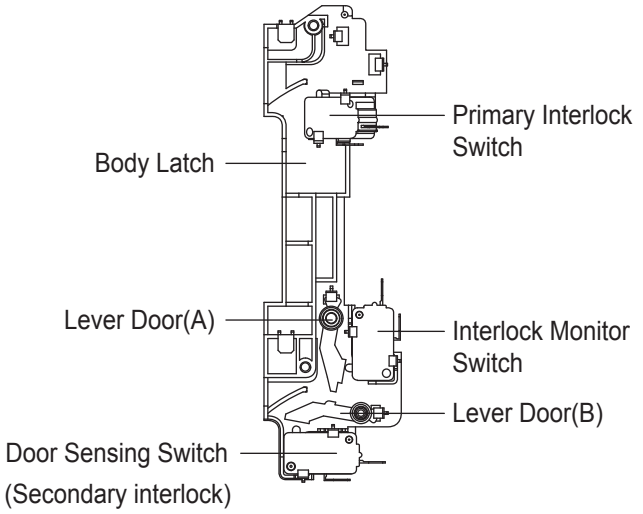
1. The relays are located on the PCB Ass'y. Isolate them from the main circuit by disconnecting the leads.
2. Operate the microwave oven with a water load in the oven. Set the power level set to high.
3. Check continuity between terminals of the relays after the start pad is pressed.

5-7 Adjustment of Primary Switch, Door Sensing Switch and Monitor Switch

PRECAUTION

For continued protection against radiation hazard, replace parts in accordance with the wiring diagram and be sure to use the correct part number for the following switches: Primary and secondary interlock switches, and the interlock monitor switch (replace all together). Then follow the adjustment procedures below. After repair and adjustment, be sure to check the continuity of all interlock switches and the interlock monitor switch.

1. When mounting Primary switch and Interlock Monitor switch to Latch Body, consult the figure.
2. No specific adjustment during installation of Primary switch and Monitor switch to the latch body is necessary.
3. When mounting the Latch Body to the oven assembly, adjust the Latch Body by moving it so that the oven door will not have any play in it. Check for play in the door by pulling the door assembly. Make sure that the latch keys move smoothly after adjustment is completed. Completely tighten the screws holding the Latch Body to the oven assembly.
4. Reconnect to Monitor switch and check the continuity of the monitor circuit and all latch switches again by following the components test procedures.
5. Confirm that the gap between the switch housing and the switch actuator is no more than 0.5mm when door is closed.
6. **Interlock Switch Replacement** - When replacing faulty switches, be sure switch mounting tabs are not bent, broken or otherwise deficient in their ability to secure the switches in place.



	Door Open	Door Closed
Primary interlock switch	∞	0
Monitor switch (COM-NC)	0	∞
Monitor switch (COM-NO)	∞	0
Door Sensing S/W (Secondary interlock)	∞	0

5-8 Output Power of Magnetron

CAUTION
MICROWAVE RADIATION

PERSONNEL SHOULD NOT ALLOW EXPOSURE TO MICROWAVE RADIATION FROM MICROWAVE GENERATOR OR OTHER PARTS CONDUCTING MICROWAVE ENERGY.

The output power of the magnetron can be measured by performing a water temperature rise test.

Equipment needed :

* Two 1-liter cylindrical borosilicate glass vessel (Outside diameter 190 mm)
* One glass thermometer with mercury column

NOTE: Check line voltage under load. Low voltage will lower the magnetron output. Make all temperature and time tests with accurate equipment.

1. Fill the one liter glass vessel with water.
2. Stir water in glass vessel with thermometer, and record glass vessel's temperature ("T_1", 10±1°C).
3. After moving the water into another glass vessel, place it in the center of the cooking tray. Set the oven to high power and operate for 52 seconds exactly. (3 seconds included as a holding time of magnetron oscillation:)
4. When heating is finished, stir the water again with the thermometer and measure the temperature ("T_2").
5. Subtract T_1 from T_2. This will give you the water temperature rise. (ΔT)
6. The output power is obtained by the following formula;

$$\text{Output Power} = \frac{4.187 \times 1000 \times \Delta T + 0.55 \times Mcx(T_2 - T_1)}{49}$$

52 : Heating Time (sec)
49 : Counting Time (sec)
4.187 : Coefficient for Water
1000 : Water (cc)
ΔT : Temperature Rise (T_2-T_1)
To : Room Temperature
Mc : Cylindrical borosilicate glass weight

7. Normal temperature rise for this model is 9°C to 11°C at 'HIGH'.

NOTE 1: Variations or errors in the test procedure will cause a variance in the temperature rise. Additional power test should be made if temperature rise is marginal.

NOTE 2: Output power in watts is computed by multiplying the temperature rise (step 5) by a factor of 91 times the of centigrade temperature.

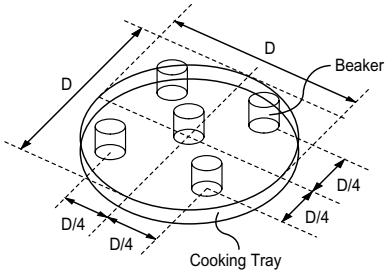
5-9 Microwave Heat Distribution - Heat Evenness

The microwave heat distribution can be checked indirectly by measuring the water temperature rise at certain positions in the oven:

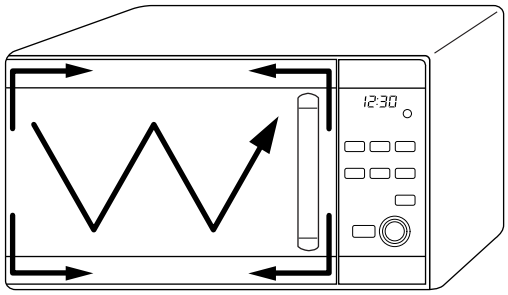
1. Prepare five beakers made of 'Pyrex', having 100 milliliters capacity each.
2. Measure exactly 100milliliters off water load with a measuring cylinder, and pour into each beaker.
3. Measure the temperature of each water load. (Readings shall be taken to the first place of decimals.)
4. Put each beaker in place on the cooking tray as illustrated in figure below. Start heating.
5. After heating for 2 minutes, measure the water temperature in each beaker.
6. Microwave heat distribution rate can be calculated as follows:

$$\text{Heat Distribution} = \frac{\text{Minimum Temperature Rise}}{\text{Maximum Temperature Rise}} \times 100(\%)$$

The result should exceed 65%.



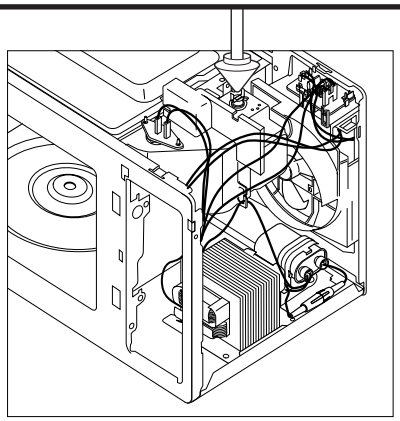
5-10 Procedure for Measurement of Microwave Energy Leakage



1. Pour 275±15cc of 20±5°C(68±9°F) water in a beaker which is graduated to 600cc, and place the beaker inthe center of the oven.
2. Start to operate the oven and measure the leakage by using a microwave energy survey meter.
3. Set survey meter with dual ranges to 2,450MHz.
4. When measuring the leakage, always use the 2 inch spacer cone with the probe. Hold the probe perpendicular to the cabinet door. Place the spacer cone of the probe on the door and/or cabinet door seam and move along the seam, the door viewing window and the exhaust openings moving the probe in a clockwise direction at a rate of 1 inch/sec. If the leakage testing of the cabinet door seam is taken near a corner of the door, keep the probe perpendicular to the areas making sure that the probe end at the base of the cone does not get closer than 5cm to any metal. If it gets closer than 5cm, erroneous readings may result.
5. Measured leakage must be less than 4mW/cm^2 , after repair or adjustment.

Maximum allowable leakage is 5mW/cm^2 .
4mW/cm^2 is used to allow for measurement and meter accuracy

5-11 Check for Microwave Leakage



1. Remove the outer panel.
2. Pour 275±15cc of 20±5°C(68±9°F) water in a beaker which is graduated to 600cc, and place the beaker in the center of the oven.
3. Start the oven at the highest power level.
4. Set survey meter dual ranges to 2,450MHz.
5. Using the survey meter and spacer cone as described above, measure near the opening of magnetron, the surface of the air guide and the surface of the wave guide as shown in the following photo.(but avoid the high voltage components.) The reading should be less than 4mW/cm^2 .

5-12 Note on Measurement

1. Do not exceed the limited scale.
2. The test probe must be held on the grip of the handle, otherwise a false reading may result when the operator's hand is between the handle and the probe.
3. When high leakage is suspected, do not move the probe horizontally along the oven surface; this may cause damage to the probe.
4. Follow the recommendation of the manufacturer of the microwave energy survey meter.

5-13 Leakage Measuring Procedure

5-13-1 Record keeping and notification after measurement

1) After adjustment and repair of a radiation preventing device, make a repair record for the measured values, and keep the data.
2) If the radiation leakage is more than 4 mW/cm^2 after determining that all parts are in good condition, functioning properly and the identical parts are replaced as listed in this manual notify that fact to ;

CENTRAL SERVICE CENTER

5-13-2 At least once a year have the microwave energy survey meter checked for accuracy by its manufacturer.

6. Troubleshooting

PRECAUTION

1. CHECK GROUNDING BEFORE CHECKING FOR TROUBLE.
2. BE CAREFUL OF THE HIGH VOLTAGE CIRCUIT.
3. DISCHARGE THE HIGH VOLTAGE CAPACITOR.
4. WHEN CHECKING THE CONTINUITY OF THE SWITCHES OR TRANSFORMER, DISCONNECT ONE LEAD WIRE FROM THESE PARTS AND THEN CHECK CONTINUITY WITHOUT THE POWER SOURCE ON. TO DO OTHERWISE MAY RESULT IN A FALSE READING OR DAMAGE TO YOUR METER.
5. DO NOT TOUCH ANY PART OF THE CIRCUIT OR THE CONTROL CIRCUIT BOARD, SINCE STATIC DISCHARGE MAY DAMAGE IT. ALWAYS TOUCH GROUND WHILE WORKING ON IT TO DISCHARGE ANY STATIC CHARGE BUILT UP.

6-1 Electrical Malfunction

SYMPTOM	CAUSE	CORRECTIONS
Oven is dead. Fuse is OK. No display and no operation at all .	1. Open or loose lead wire harness 2. Open thermal cutout (Magnetron) 3. Open low voltage transformer 4. Defective Ass'y PCB	Check fan motor when thermal cutout is defective. Check Ass'y PCB when L.V.T is defective.
No display and no operation at all. Fuse is blown.	1. Shorted lead wire harness 2. Defective primary latch switch **(NOTE 1)** 3. Defective monitor switch **(NOTE1)** 4. Shorted H.V.Capacitor 5. Shorted H.V.Transformer **(NOTE2)**	Check adjustment of primary, inte lock monitor, power relay, door sensing switch.
	NOTE 1: All of these switches must be replaced at the same time. (refer to adjustment instructions) Check continuity of power relay contacts and if it has continuity, replace power relay also. **NOTE 2**: When H.V.Transformer is replaced, check diode and magnetron also.	
Oven does not accept key input (Program)	1. Key input is not in-Sequence 2. Open or loose connection of membrane key pad to Ass'y PCB 3. Shorted or open membrane panel 4. Defective Ass'y PCB	Refer to operation procedure. Replace PCB main.
Timer starts countdown but no microwave oscillation. (No heat while oven lamp and fan motor turn on.)	1. Off-alignment of latch switches 2. Open or loose connection of high voltage circuit especially magnetron filament circuit **NOTE**: Large contact resistance will bring lower magnetron filament voltage and cause magnetron to lower output and/or intermittent oscillation. 3. Defective high voltage components H.V.Transformer, H.V. Capacitor, H.V.Diode, H.V.Fuse, Magnetron 4. Open or loose wiring of power relay 5. Defective primary latch switch 6. Defective power relay or Ass'y PCB	Adjust door and latch switches. Check high voltage component according to component test procedure and replace if it is defective. Replace PCB main.

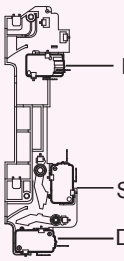
6-1 Electrical Malfunction(continued)

SYMPTOM	CAUSE	CORRECTIONS
Oven lamp and fan motor turn on	1. Misadjustment or loose wiring of primary latch switch 2. Defective primary latch switch	Adjust door and latch switches.
Oven can program but timer does not start.	1. Open or loose wiring of secondary interlock switch 2. Off-alignment of primary interlock 3. Defective secondary interlock S/W	Adjust door and interlock switches.
Microwave output is low;. Oven takes longer time to cook food.	1. Decrease in power source voltage. 2. Open or loose wiring of magnetron filament circuit. (Intermittent oscillation) 3. Aging of magnetron	Consult electrician.
Fan motor turns on when plugged in	Loose wiring of door sensing switch	Check wire of door sensing switch.
Oven does not operate and return to the plugged in mode.	Defective Ass'y PCB	Replace PCB main.
Loud buzzing noise can be heard.	1. Loose fan and fan motor 2. Loose screws on H.V.Transformer 3. Shorted H.V.Diode	Tighten screws of fan motor. Tighten screws of H.V.Transformer. Replace H.V.Diode.
Turntable motor does not rotate.	1. Open or loose wiring of turntable motor. 2. Defective turntable motor.	Replace turntable motor.
Oven stops operation during cooking	1. Open or loose wiring of primary interlock switch 2. Operation of thermal cutout(Magnetron)	Adjust door and latch switches.
Sparks	1. Metallic ware or cooking dishes touching on the oven wall. 2. Ceramic ware trimmed with gold or silver powder also causes sparks.	Inform the customer. Do not use any type of cookware with metallic trimming.
Uneven cooking	Uneven intensity of microwave due to its characteristics.	Wrap thinner parts of the food with aluminum foil. Use plastic wrap or cover with a lid. Stir once or twice while cooking foods such as soup, cocoa, or milk.
Noise from the turntable motor when it starts to operate.	Noise may result from the motor.	Replace turntable motor.

Oven does not operate.

* Inspection method

Is Fuse OK? — No → Is Primary interlock switch normal? — No → Make sure to inspect the power relay after replacing primary interlock switch, secondary interlock switch and door sensing switch.



* Latch switch assembly

Yes / Yes

Is Power Relay normal? — No → Replace Relay

Is the magnetron temperature switch normal? — No → Replace switch → Check a fan motor after replacing switch

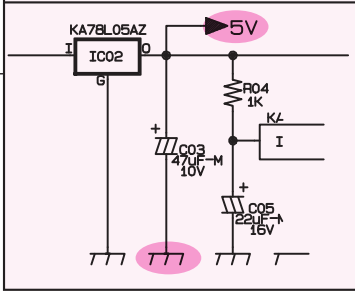
Yes

Is L.V.T normal? — No → Replace L.V.T. → Check PCB after replacing L.V.T.

Yes

Is the IC01 output of PCB normal? — No → Replace PCB.

Power Point Check Point



Yes

Checking high voltage circuits — Is high voltage diode normal? — No → Is high voltage capacitor normal? — No → In case any of high voltage parts is damaged, check all parts related to high votlage.

Yes

Is high voltage capacitor normal? — No → In case any of high voltage parts is damaged, check all parts related to high votlage.

Yes

Is magnetron norma? — No

Caution

1.Be careful of high voltage circuits.

2. Discharge high voltage capacitor. .

6-1 Electrical Malfunction(continued)

Buttons of the control panel do not work.

* Inspeciton method

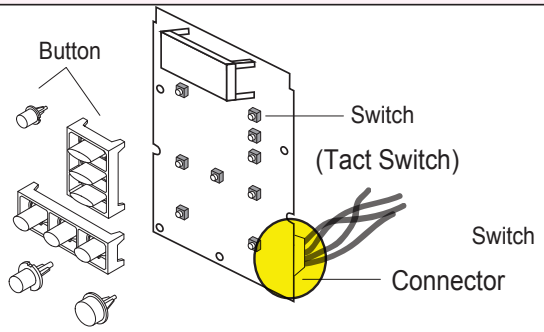
Are buttons pressed in the correct order?

No → Refer to User Manual

Yes

Is the connector of the control panel normal?

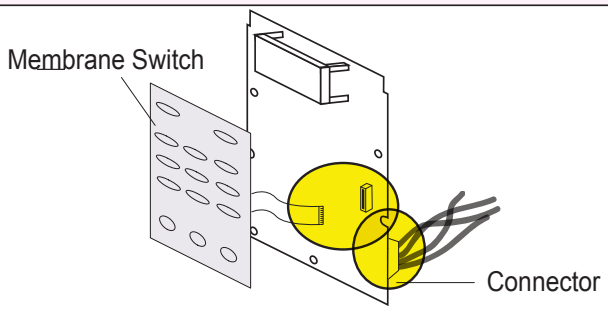
No → Tact Type



Yes

Replace PCB.

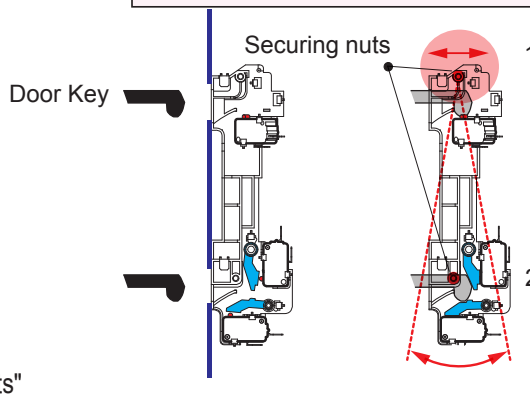
Membrane Type



Food is not heated even though an oven works.

Is the latch switch operating normally?

No → Method to control latch switch



* Door open

* Door closed

1. Loosenly tighten the nuts to check whether the primary interlock switch works by slightly moving latches to right and left. Then firmly tighten nuts.

2. Check whether the secondary interlock switch and door sensing switch work by slightly moving latches to right and left, then firmly tighten nuts.

Yes

Checking high voltage circuits

Refer to "Checking high voltage circuits" on the previous page.

6-2 Error Code Numbering Rule

1. ERROR CODE NUMBERING RULE is applied to a microwave oven and an oven.(CMO, OTR, Grill, Convection, Commercial etc.)

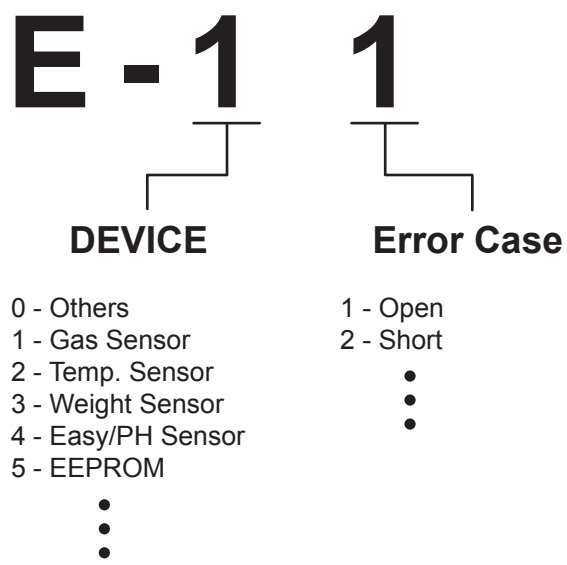
2. All sensors and devices have their own number.
   ex) Gas Sensor = 1, Temp. Sensor = 2, ...

3. Of each device, No.1 and No.2 refer to “Open Error” (not sensed) and “Short Error”, respectively.

4. For unusual cases, errors can be indicated in letters after discussion in advance.
   ex) Key Short Error (-SE-)

5. Error code not mentioned below should be discussed in advance and approved by P/L and numbered, reported to relevant departments.

6. This numbering rule has been applied to models to have been developed since January, 1, 2005.
   (*But, GE or Customize model are excluded.*)



6-2 Error Code Numbering Rule(continued)

Error Code List

Gas Sensor

Error Code	Gas Sensor Error Case (E-1X)
E-11	Open
E-12	Short
E-13	T1 Max Time Error
E-14	Dry Up / No Load

Temp Sensor

Error Code	Temp. Sensor Error Case (E-2X)
E-21	Open
E-22	Short
E-23	T1 Max Time Error (Preheating not completed)
E-24	Over temperature error
E-25	In case abnormal temperature is sensed at Micro Cook
E-26	In case the temperature is not over the fixed AD in first 3 minutes after cooking by heater starts.

Weight Sensor

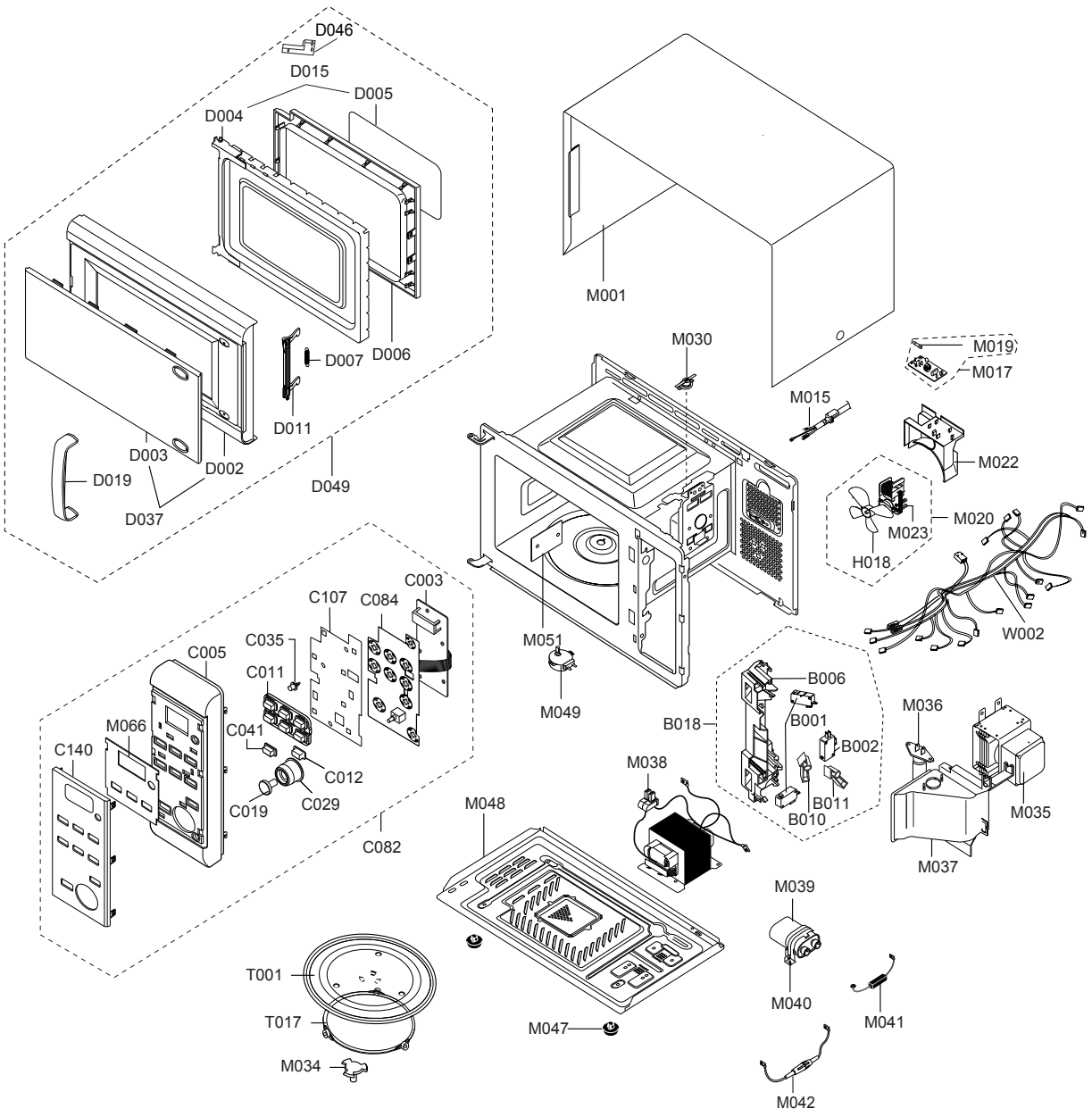
Error Code	Gas Sensor Error Case (E-1X)
E-31	Open (When value of HEX is above “FF” for 5 seconds)
E-32	Short
E-33	In case the initial value of HEX is under “14” for 30 seconds while a weight sensor in operation.
E-34	In case the initial value of K calculated by a weight sensor is above and under “±28” as value of HEX.
E-35	In case the value of A is “-” as a weight sensor calculates.
E-36	In case the door opens during sensor cooking.

Easy/Ph Sensor

Error Code	Easy/PH Sensor Error Case (E4)
E-41	Open
E-42	Short
E-43	T1 Max Time Error
E-44	Dry Up
E-45	Cooling Error (3minutes)
E-46	Primary Open Error(3minutes)
E-47	The door opens during cooking

7. Exploded Views and Parts List

7-1 Exploded Views



7-2 Main Parts List

S.N.A : SERVICE NOT AVAILABLE

LEVEL	No.	Code No.	Description	Specification	Q'ty	SA/ SNA	Remark
1-1	M036	4713-001031	LAMP-INCANDESCENT	230V,173mA,40W,ORG,-,-	1	SA	
1-1	M038	DE26-00091A	TRANS H.V	SHV-D700A-1,220V,60HZ,2140V/3.	1	SA	
1-1	M049	DE31-10154A	MOTOR SYNCHRONOUS	M2HJ49ZR02,ST-16,50/60	1	SA	
1-1	M030	DE47-20008A	THERMOSTAT	PW2N-52JC,100/60,250V/7.5A,H,	1	SA	
1-1	M001	DE64-00350F	PANEL-OUTER	RE-C40S,C/STEEL,T0.5,W348.8,	1	SA	
1-1	M034	DE67-00140A	COUPLER	NC2000(0.6~0.8),PPS(ESS840),-,	1	SA	
1-1	M022	DE71-00148A	COVER-BLOWER	MW850WA,PP,T1.5,-,-,-,NTR,N	1	SA	
1-1	M051	DE71-00151B	COVER-MGT	RE-C40,PP,-,W54,L129,-,GRY,NC2	1	SA	
1-1	M037	DE71-60457C	COVER-AIR	3RD-0.7(BTM),PP(FH44N),-,-,-,-	1	SA	
1-1	T001	DE74-20102E	TRAY-COOKING	NC 0.8,GLASS,T6,890G,-,-,-,	1	SA	
1-1	M017	DE96-00010B	ASSY NOISE FILTER	SN-3WDB,250V10A,NO-INR	1	SA	
1-2	M019	3601-000178	FUSE-CARTRIDGE	250V,10A,SLOW-BLOW,GLASS,	1	SA	
1-1	M020	DE96-00031D	ASSY-MOTOR FAN	SMF-3RDDA,220V60HZ,2400RP	1	SA	
1-2	M023	DE31-10184C	MOTOR FAN	-,220V60HZ,-,SMF-3RDDA,2400RPM	1	SA	
1-2	H018	DE31-90057A	BLADE-FAN	PP,T1.5,-,3RD-W,-,-,-	1	SA	
1-2	M039	2501-001021	C-OIL	740nF,2100V,BK,35X54X70,20mm	1	SA	
1-2	M040	DE61-00139A	BRACKET-HVC	NC2000,SECC,T0.8,-,-,-,0.6/0	1	SNA	
1-2	M047	DE61-40066A	FOOT	-,PP,-,BLK,-,-,-	2	SA	
1-2	M048	DE80-00023A	BASE-PLATE	MW850WA,SGCC1,T0.6,-,-,NC2000	1	SA	
1-2	M041	0402-001554	DIODE-RECTIFIER	HV03-12T01,12000V,0.4A,D	1	SA	
1-1	B018	DE96-00120W	ASSY BODY LATCH	M1717N,NC2000 PP (FB53 G	1	SA	
1-2	B002	3405-001032	SWITCH-MICRO	125/250VAC,16A,200GF,SPDT	1	SA	
1-2	B001	3405-001034	SWITCH-MICRO	125/250VAC,16A,200GF,SPST-N	2	SA	
1-2	B010	DE66-00093C	LEVER-SWITCH(A)	M1717N,NC2000 PP (FB53 G	1	SA	
1-2	B011	DE66-00094C	LEVER-SWITCH(B)	M1717N,NC2000 PP (FB53 G	1	SA	
1-2	B006	DE72-00137E	LATCH-BODY	NC2000(0.6/0.8/1.2),PP(FB53 G	1	SA	
1-1	M015	DE96-00252C	ASSY POWER CORD	EU(ST),DOMESTIC,220V/60H	1	SA	
1-1	W002	DE96-00419A	ASSY-WIRE HARNESS A	RE-C230T-1,CMO	1	SA	
1-1	T017	DE97-00193B	ASSY-GUIDE ROLLER	NC2000 0.8,T2*P1198(14	1	SA	
1-1	M035	OM75S(31)ESNY	ASSY-MGT		1	SA	

7-3 Control & Door Parts List

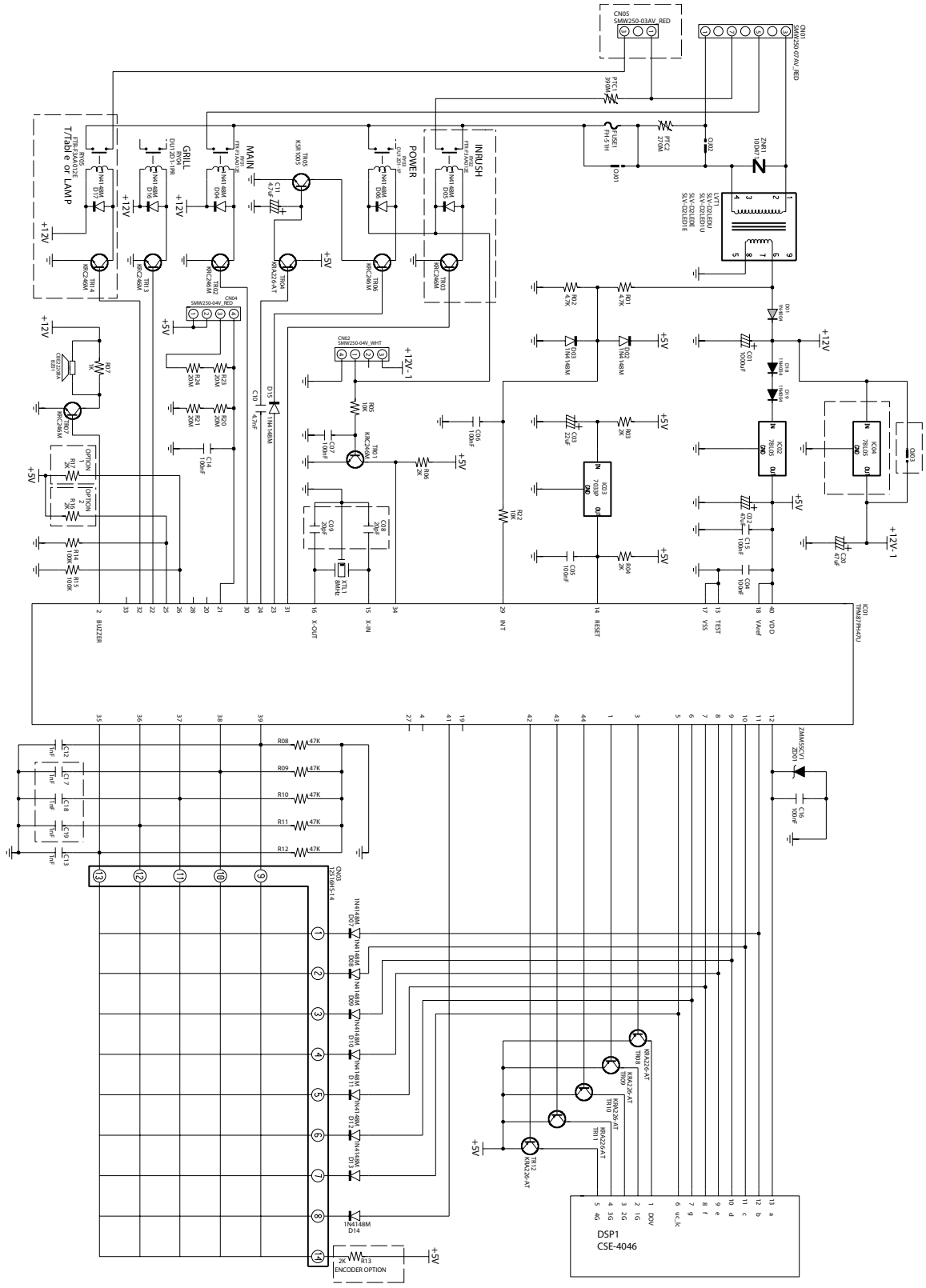
S.N.A : SERVICE NOT AVAILABLE

LEVEL	No.	Code No.	Description	Specification	Q'ty	SA/ SNA	Remark
1-1	D049	DE94-01141G	ASSY DOOR	RE-C300S,VICTORY-SILVER,DOMEST	1	SNA	
1-2	D007	DE61-00198A	SPRING-KEY	M1877,HSWR,PI0.7,-,D6,23 1/4,	1	SA	
1-2	D011	DE64-00211A	DOOR-KEY	NC2000(0.6/0.8/1.2),PP,-,BLK,-	1	SA	
1-2	D006	DE64-00283A	DOOR-C	NC2000 0.7(NEW),PP,-,BLK,-,T1.	1	SA	
1-2	D046	DE64-00284A	DOOR-CAP	NC2000 0.7(NEW),PP,-,BLK,-,T1.	1	SA	
1-2	D019	DE64-01246A	HANDLE-DOOR	EURO-MAIN,ABS(HG0760S),-,-,-	1	SA	
1-2	D015	DE94-00459A	ASSY DOOR-SUB	MW850WA,BLK,DOOR-E+FILM	1	SA	
1-3	D004	DE94-00351B	ASSY DOOR-E(COATING)	MW850WA,BLK-COATING	1	SA	
1-2	D037	DE94-01146C	ASSY DOOR-A	RE-C300,VICTORY-SIL,DOMESTIC	1	SA	
1-3	D005	DE64-00221B	FILM-DOOR	-,-,T0.13,W264*L143,-,-,-,NC08	1	SA	
1-3	D002	DE64-01244B	DOOR-A	MW81W-S/82W-S/87W-S,ABS(HG0760	1	SA	
1-3	D003	DE64-01245B	SCREEN-DOOR	RE-C300,SAN(CR5381),-,-,-,-,	1	SA	
1-1	C082	DE94-01148G	ASSY CONTROL-BOX	220V60HZ,RE-C300S,VICTO	1	SNA	
1-2	C107	DE01-00156A	FILM-BOARD	-,GE87/GE107,PET,T0.12,-,-,TR	1	SA	
1-2	M066	DE01-00157A	FILM-LAMP	-,GE87/GE107,PET,T0.12,-,-,OPA	1	SA	
1-2	C140	DE63-00270F	COVER-PANEL(TC)	RE-CC300S,SAN(CR5381),-,	1	SNA	
1-2	C019	DE64-01156E	BUTTON-START	RE-C300,ABS(HG0760S),-,-,VI	1	SNA	
1-2	C029	DE64-01157B	KNOB-DIAL	MW87W/GE87W,ABS(HG0760S),-,-,-	1	SA	
1-2	C005	DE64-01247B	CONTROL-PANEL(TC)	MW87W-S,ABS(HG0760S),-	1	SA	
1-2	C035	DE64-01256A	BUTTON-CLOCK(TC)	EURO-MAIN,SAN,-,-,G0140	1	SA	
1-2	C011	DE64-01362A	BUTTON-SELECT(A)	EURO MAIN-VI,ABS(HG0760	1	SA	
1-2	C084	DE96-00404A	ASSY-KEY MODULE	DKM-MW87,KEY-MODULE	1	SA	

7-4 Standard Parts List

LEV-EL	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
1-1	6002-000231	SCREW-TAPPING	TH,+,-,2S,M4,L12,ZPC(YEL),	6	SNA	BASE-P,BD-LAT,C-AIR,CV/BLW
1-1	6002-001321	SCREW-TAPPING	PWH,+,2S,M5,L10,ZPC(YEL)	5	SNA	HVT,MGT
1-1	6002-001355	SCREW-TAPPING	TH,+,2S,M4,L12,NI PLT,SWRC	1	SNA	P/OUT
1-1	6006-001170	SCREW-TAPPING	TH,+,WT,TC,M4,L10,ZPC(YEL)	3	SNA	N/P EARTH,P/C EARTH,PCB EARTH
1-1	6006-001174	SCREW-TAPPING	WE,TH,+,M4,L12,ZPC(YEL)	5	SA	C-BOX,OUT-PN
1-1	6006-001176	SCREW-TAPTITE	WT,PH,+,M4,L8,ZPC(YEL)	1	SNA	BAS-EARTH
1-1	DE60-30016A	NUT-FLANGE	M4,MSWR10,-,-,-,-,-,-	2	SA	
1-2	6002-000643	SCREW-TAPPING	TH,+,2S,M4,L10,ZPC(YEL),SW	2	SNA	HANDLE-DOOR
1-2	6002-000630	SCREW-TAPPING	PH,+,-,2S,M3,L8,ZPC(YEL),S	4	SNA	ASSY-PCB,KEY-MODUL

8. Schematic Diagram (This Document can not be used without Samsung's authorization)

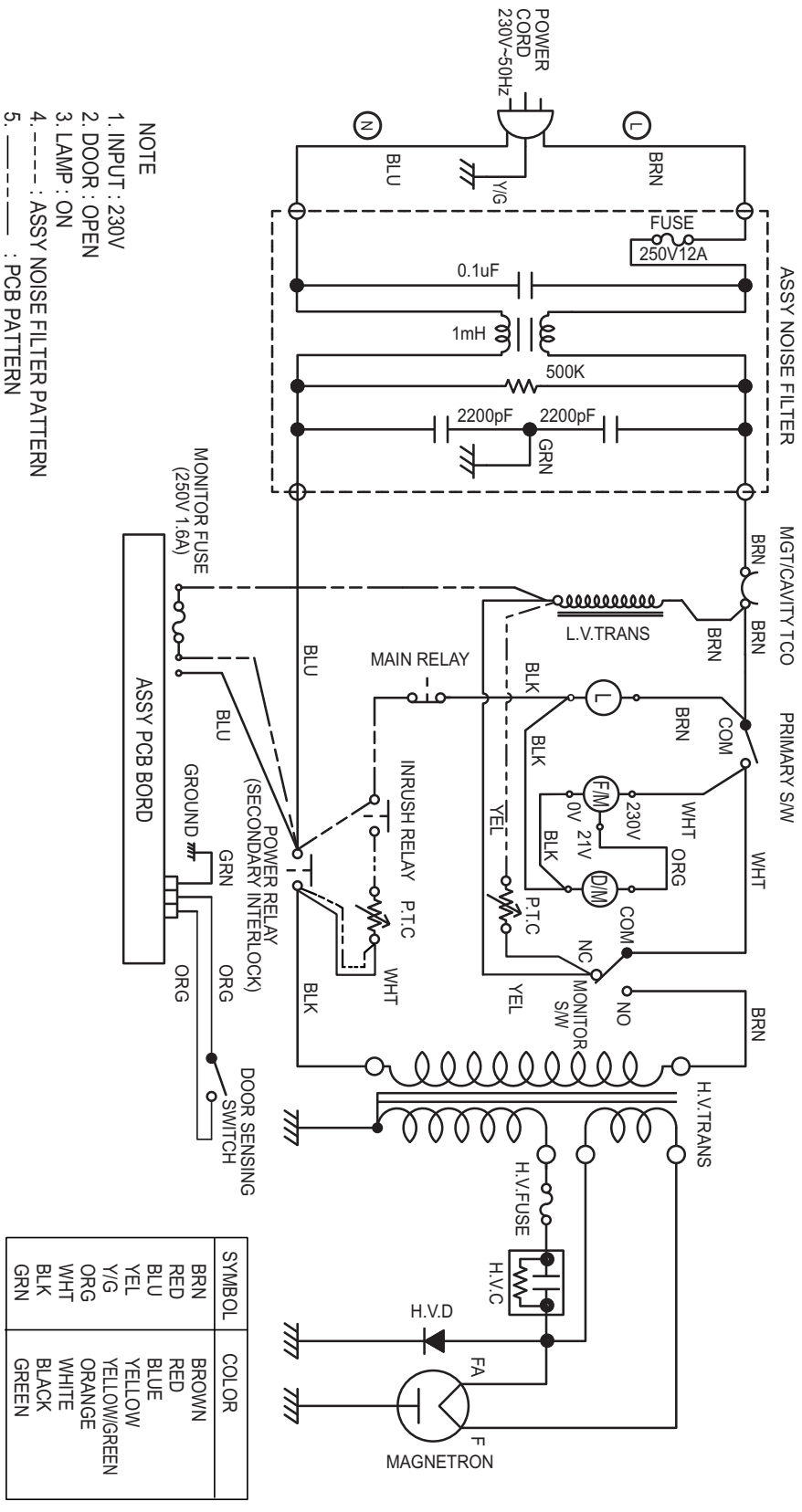


9. P.C.B Parts List

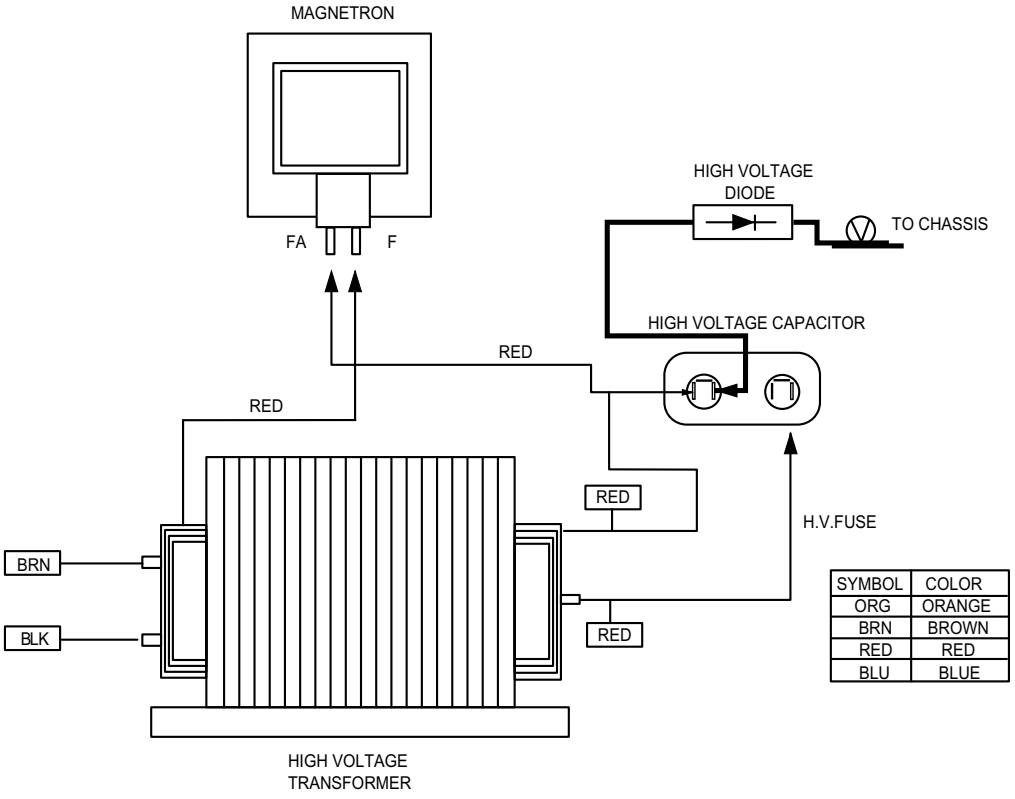
S.N.A : SERVICE NOT AVAILABLE

LEVEL	Code No.	Description	Specification	Q'ty	SA/SNA	Remark
1-2	RES-D2LED3-16	ASSY PCB PARTS	RE-C260,220V60HZ	1	SA	
1-3	0401-001002	DIODE-SWITCHING	1N4148M,100V,200mA,DO-34	14	SNA	D02~D15
1-3	0402-001103	DIODE-RECTIFIER	1T4,400V,1A,SOD-106,TP	3	SNA	D01,D18,D19
1-3	0504-001044	TR-DIGITAL	KRA226M,PNP,400MW,2.2K/ 10K,TO	6	SNA	TR04,TR08~TR12
1-3	0504-001178	TR-DIGITAL	KRC246M,NPN,400mW,2.2K/10	6	SNA	TR01,TR02,TR03, TR05~TR07
1-3	1203-001037	IC-POSI.FIXED REG.	78L05,SOT-89,3P,185MI	1	SNA	IC02
1-3	1404-001194	THERMISTOR-PTC	39ohm,20%,220/240V,270Vac	1	SNA	PTC1
1-3	2001-000273	R-CARBON	100KOHM,5%,1/ 8W,AA,TP,1.8X3.2M	1	SNA	R15
1-3	2001-000290	R-CARBON	10KOHM,5%,1/ 8W,AA,TP,1.8X3.2MM	2	SNA	R05,R22
1-3	2001-000429	R-CARBON	1KOHM,5%,1/ 8W,AA,TP,1.8X3.2MM	1	SNA	R07
1-3	2001-000577	R-CARBON	2KOHM,5%,1/ 8W,AA,TP,1.8X3.2MM	4	SNA	R03,R04,R06,R13
1-3	2001-000734	R-CARBON	4.7KOHM,5%,1/ 8W,AA,TP,1.8X3.2M	2	SNA	R01,R02
1-3	2001-000786	R-CARBON	47KOHM,5%,1/ 8W,AA,TP,1.8X3.2MM	5	SNA	R08,R09~R12
1-3	2202-000252	C-CERAMIC,MLC-AXIAL	4.7nF,10%,50V,X7R,TP	1	SNA	C10
1-3	2203-000192	C-CER,CHIP	100nF,+80-20%,50V,Y5V,2012	6	SNA	C04~C07,C15,C16
1-3	2203-000444	C-CER,CHIP	1nF,10%,50V,X7R,2012	2	SNA	C12,C13
1-3	2401-000151	C-AL	1000uF,20%,25V,GP,TP,10x20,5	1	SNA	C01
1-3	2401-000911	C-AL	22uF,20%,16V,GP,TP,5x7,5	1	SNA	C03
1-3	2401-002075	C-AL	4.7uF,20%,50V,GP,TP,5x11,5	1	SNA	C11
1-3	2401-003107	C-AL	47uF,20%,16V,GP,TP,5x7,5	1	SNA	C02
1-3	2802-000188	RESONATOR-CERAMIC	8MHz,0.5%,TP,10.0x5.0x	1	SNA	XTL1
1-3	3501-000264	RELAY-POWER	12VDC,-,16000MA,-,9MS,5MS	1	SNA	RY03
1-3	3501-001154	RELAY-MINIATURE	12Vdc,200mW,3000mA,1Form	2	SNA	RY01,RY02
1-3	3708-001551	CONNECTOR-FPC/FFC/PIC	14P,1.25MM,STRAIGH	1	SNA	CN03
1-3	3711-000940	HEADER-BOARD TO CABLE	BOX,4P,1R,2.5MM,ST	1	SNA	CN02
1-3	DE02-00036A	CHEMICALS-FLUX SOLDER	KS-77S,-,-,-,-,KOK	3	SNA	
1-3	DE02-00060A	CHEMICALS-ALCOHOL	ALL,MODEL,-,-,-,-,-,-	3	SNA	
1-3	DE02-00083A	SOLDER-WIRE	S63S,D3.0,-,-,-,-,-,-	2	SNA	
1-3	DE02-00086A	SOLDER-WIRE FLUX	RS60S,-,D1.2,60SN/40PB,	1	SNA	
1-3	DE07-00074E	LED DISPLAY	CSE-4046G-05,2&3,LED1-05,40	1	SNA	DSP1
1-3	DE09-00463A	IC MICOM	TMP87CH47U-5UC6,RE-C300,	1	SNA	IC01
1-3	DE13-20009A	IC	KA7533,DIP,-,-,-,-,-	1	SNA	IC03
1-3	DE26-00113A	TRANS L.V	SLV-D2LEDE,230V,50HZ,13V,0.18	1	SA	LVT1
1-3	DE30-20016A	BUZZER	CBE2220BA,STICK,-,-,-,-,-,-,-	1	SNA	BZ01
1-3	DE39-60001A	WIRE-SO COPPER	,PI0.6,SN,T,52MM TAPING_W	3	SNA	J01,J02,OJ01
1-3	DE41-00300A	PCB-MAIN	D2LED3,FR-1,1,-,T1.6,301*252MM	1	SNA	
1-3	3711-004142	HEADER-BOARD TO CABLE	BOX,3P,1R,5MM,STRA	1	SNA	CN01

10. Wiring Diagrams (This Document can not be used without Samsung's authorization)



10. Wiring Diagrams(Continued)



SYMBOL	COLOR
ORG	ORANGE
BRN	BROWN
RED	RED
BLU	BLUE

11. Reference

11-1 Model name standard

Baoad Classification	Distin-guisher	Middle Classfication	Distin-guisher	Product Code	Full Nane
USA CMO	M	CMO (Counter-top MWO)	W	MW	USA CMO(EPOXY CAVITY)
		UTC (Under The Cabinet)	U	MU	USA UTC
		Browner, Grill	G	MG	USA GRILL
		Convection	C	MC	USA CONVECTION
		Sensor	S	MS	USA CMO SENSOR
		DC MWO	D	MD	USA DC MWO
		Hospital MWO	H	MH	USA Hospital MWO
		Ceramic Enamel	E	ME	USA CMO(CERAMIC ENAMEL)
USA RV	R	SOLO	M	RM	USA RV SOLO
		CONVECTION	C	RC	USA RV CONVECTION
		BUILT-IN	B	RB	USA RV BUILT-IN
USA Junior	SJ			SJ	USA Junior MWO
USA OTR	SM	SOLO	H	SMH	USA OTR SOLO
		CONVECTION	V	SMV	USA OTR CONVECTION
EUROPE Ep-oxy Cavity	M	SOLO	1	M1	EUROPE SOLO(EPOXY CAVITY)
		GRILL	2	M2	EUROPE GRILL(EPOXY CAVITY)
EUROPE Ce-ramic Enamel	CE	SOLO	1	CE1	EUROPE SOLO(CERAMIC ENAMEL)
		GRILL	2	CE2	EUROPE GRILL(CERAMIC ENAMEL)
EUROPE Quartz GRILL	G2			G2	EUROPE Quartz GRILL
EUROPE Power Grill	PG			PG	POWER GRILL
EUROPE Con-vection	CK			CK	EUROPE CONVECTION
	C			C	EUROPE CONVECTION
EUROPE Fully Built-In	F	SOLO	W	FW	EUROPE SOLO FULLY BUILT-IN
		GRILL	G	FG	EUROPE GRILL FULLY BUILT-IN
		CONVECTION	C	FC	EUROPE CONVECTION FULLY BUILT-IN

11-2 Customer inquiry cases and countermeasures

Symptom	Cause	Countermeasures
Air is evacuated from the oven.	• The vent of the oven is designed to be placed on the bottom of the product, and air is evacuated from the oven.	In the past, the vent was placed on the back panel of the oven. Since the oven was placed near the wall of a kitchen, the wall behind the oven was discolored. Thus, the vent of a new oven is placed on the bottom of the product, and air is evacuated from the oven.
The oven works automatically whenever the power is turned on.	• It may happen due to power failure or abnormal voltage. • It may happen when the door does not close completely.	• Connect the power plug three seconds after disconnecting the power plug. • Close the door completely => Press the Cancel button => Press the Start button.
Heating	• In many cases, it may happen when the power level is incorrectly set. • It may happen when the door does not close completely. • It may happen when the oven is out of order.	• Select HIGH by rotating the Cooking Power Control knob. - KEEP WARM: This function is used to warm the cooked food for a certain time period, not to heat the food. - MEDIUM/LOW: This function is used to cook the food slowly. • Close the door completely. => Press the Cancel button. => Press the Start button. • Contact the nearest Samsung after-sales service center.
Ground	• Ground problem may happen when the oven is placed in a humid area and the over is not grounded. • Ground is not provided by an extended electric outlet.	• If the oven is placed in a humid area, buy an electric wire in a store selling electrical products. (Electric wires for home use are also allowed) Ground the oven through the electric wire. • Buy an electric wire in a store selling electrical products. (Electric wires for home use are also allowed) Ground the oven through the electric wire.
Turn table occasionally rotates in reverse order.	• Turntable has been designed to rotate in either direction since 1994.	• In the past, the gear of the turntable was easily worn by turning it during cleaning. Now, the turntable of the oven is designed to rotate in both directions to prevent damage during cleaning. (Rotation direction is set when the oven initially operates.)
The oven sometimes beeps.	• The oven beeps every minute unless the food is in the oven after the food is cooked completely. • The oven occasionally beeps during cooking.	• Open and close the door again. (Beeping sounds indicate that the food is ready to be removed from the oven after cooking is complete.)

11-2 Customer inquiry cases and countermeasures (Continued)

Symptom	Cause	Countermeasures
Strange popping sounds are produced while fish is cooked.	• Since fish is salty and maintains its moisture, it is cooked while making a series of soft popping sounds. (The liquid may come out of the fish when the fish is cooked.)	• Food with bones such as fish (e.g. mackerel) and pork (e.g. pork chops) is cooked while making a series of soft popping sounds. Wrap the food completely so that food particles or spattered oils do not stick to the oven walls or floor.
Strange smell is produced in the oven.	• It may happen when food particles stuck to oven walls or floor. “	• Clean the inside of the oven. => Remove strange smell through the Deodorant button => If the strange smell still remains, place a piece of lemon on the turntable and operate the oven for 5 minutes by pressing the Deodorant button.(However, the smells produced from the food exposed such as herbal remedies are not removed.)
Error	• Errors are classified into the case which is out of order and the case which is not out of order.	• Clean the inside of the oven. => Remove strange smell through the Deodorant button => If the strange smell still remains, place a piece of lemon on the turntable and operate the oven for 5 minutes by pressing the Deodorant button. (However, the smells produced from the food exposed such as herbal remedies are not removed.)
Accessory		• Visit the nearest Samsung Service Center or local dealer to buy accessories. Before visiting, check the model name printed on the lower right side of the front panel of the oven.
Number does not appear on the display screen.	It happens when the power saving function is activated.	• Since the government recommends the reduction of electricity, the power saving function is performed for number display like that power cord is unplugged when the oven is not used. (Numbers are displayed when another button is pressed or when the door opens.)

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