

S/M No. : **R6L9R5S001**

# Service Manual

## Microwave Oven

Model: KOR-6L9R5S

### ✓ Caution

: In this Manual, some parts can be changed for improving, their performance without notice in the parts list. So, if you need the latest parts information, please refer to PPL(Parts Price List) in Service Information Center (<http://svc.dwe.co.kr>).

**DAEWOO**   
ELECTRONICS

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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 power to the microwave oven 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.

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# SAFETY AND PRECAUTIONS

## 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 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 servicing, a microwave emission check should be performed prior to servicing the oven.
  - (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 the dealer immediately.

### IMPORTANT

The wire in this main lead coloured in accordance with the following code.

Green-and-yellow	: Earth
Blue	: Neutral
Brown	: Live

As the colours of the wires in the main lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows.

The wire which is coloured green-and-yellow must be connected to the terminal in the plug which is marked with the letter 'E', earth symbol or coloured green-and-yellow.

The wire which is coloured blue must be connected to the terminal which is marked with the letter 'N' or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter 'L' or coloured red.

### NOTE :

The oven is designed for counter-top use only.

# SPECIFICATIONS

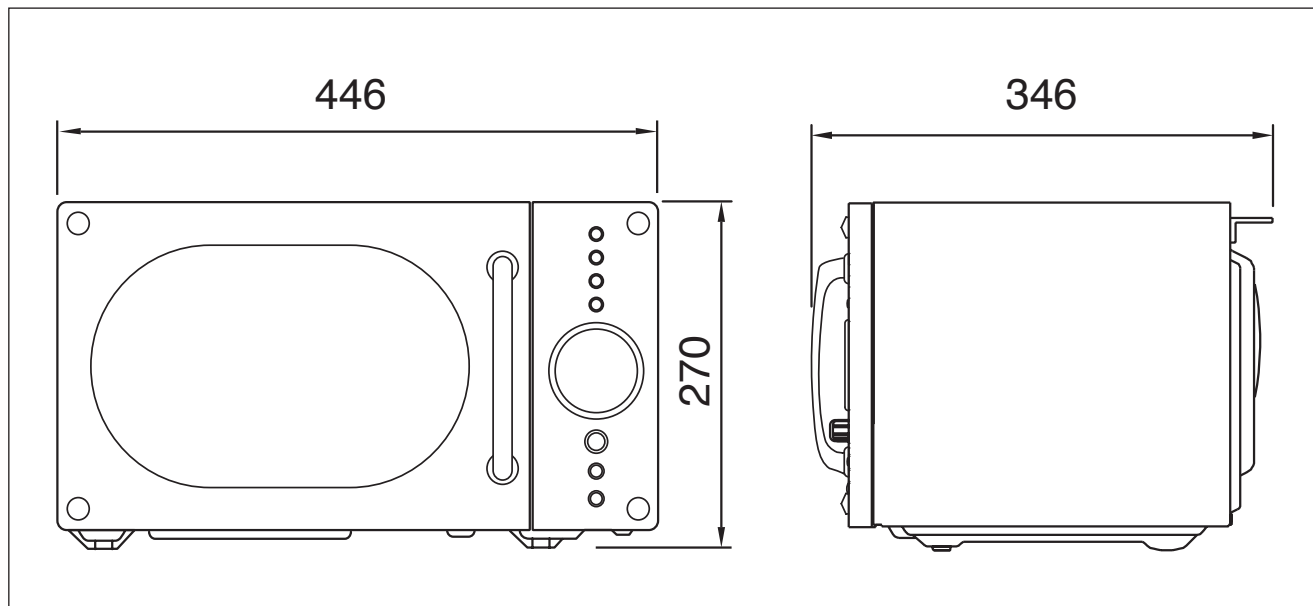
MODEL		<b>KOR-6L9R5S</b>
POWER SUPPLY		230V-50Hz, SINGLE PHASE WITH EARTHING
POWER CONSUMPTION	MICROWAVE	1200W
	GRILL	
	COMBINATION	
MICROWAVE ENERGY OUTPUT		800W
MICROWAVE FREQUENCY		2450MHz
OUTSIDE DIMENSIONS (W X H X D)		446 X 270 X 346 mm(17.6 X 10.6 X 14.8 in)
CAVITY DIMENSIONS (W X H X D)		295 X 219 X 303 mm(11.6 X 8.6 X 11.9in)
NET WEIGHT		APPROX. 10.3 kg(22.7lbs)
TIMER		60 min. 00 sec.
FUNCTION SELECTIONS		MICROWAVE
POWER SELECTIONS		5 LEVELS
CAVITY VOLUME		0.7 Cu. Ft.

\* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

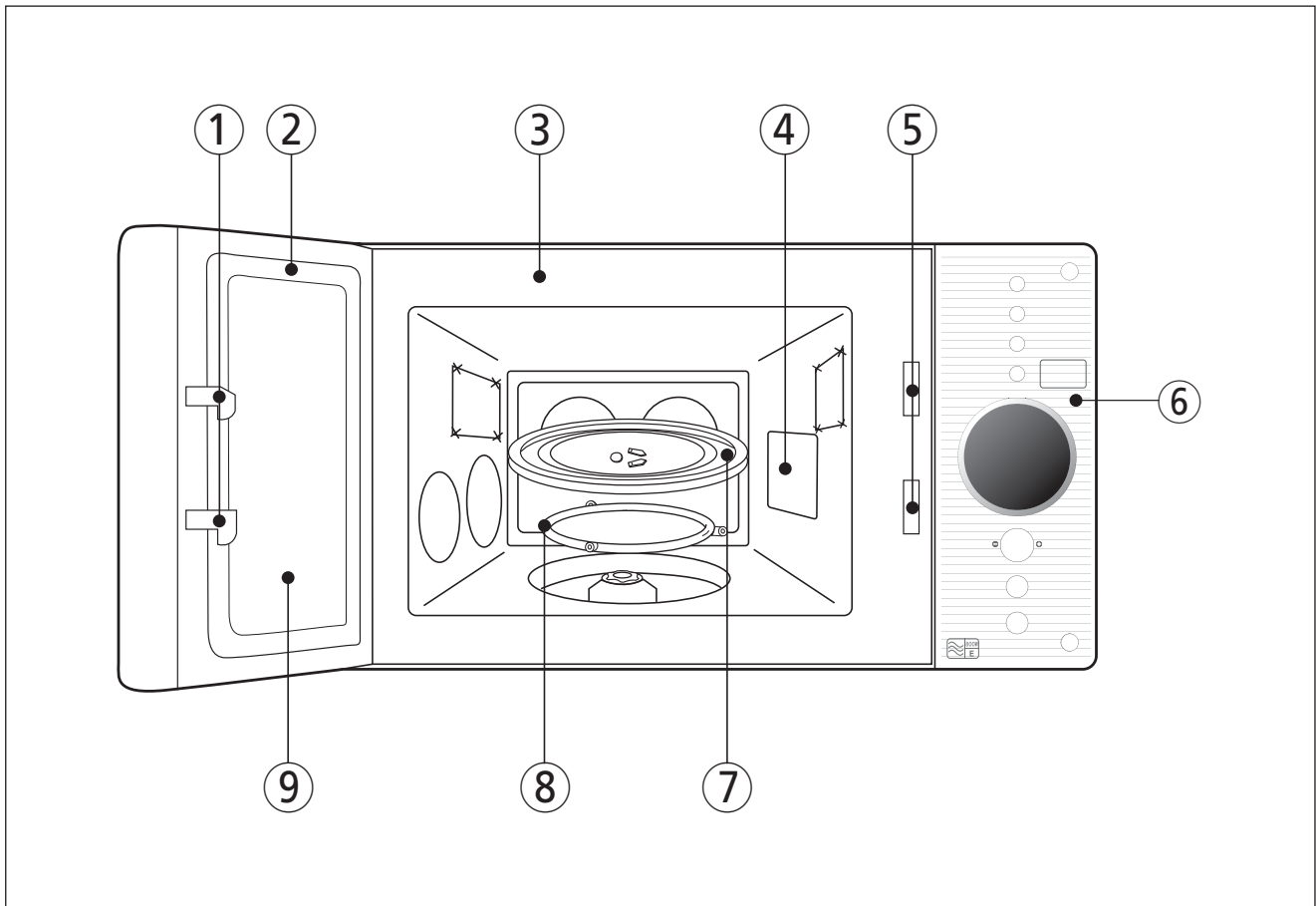
# EXTERNAL VIEW

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## 1. OUTER DIMENSION

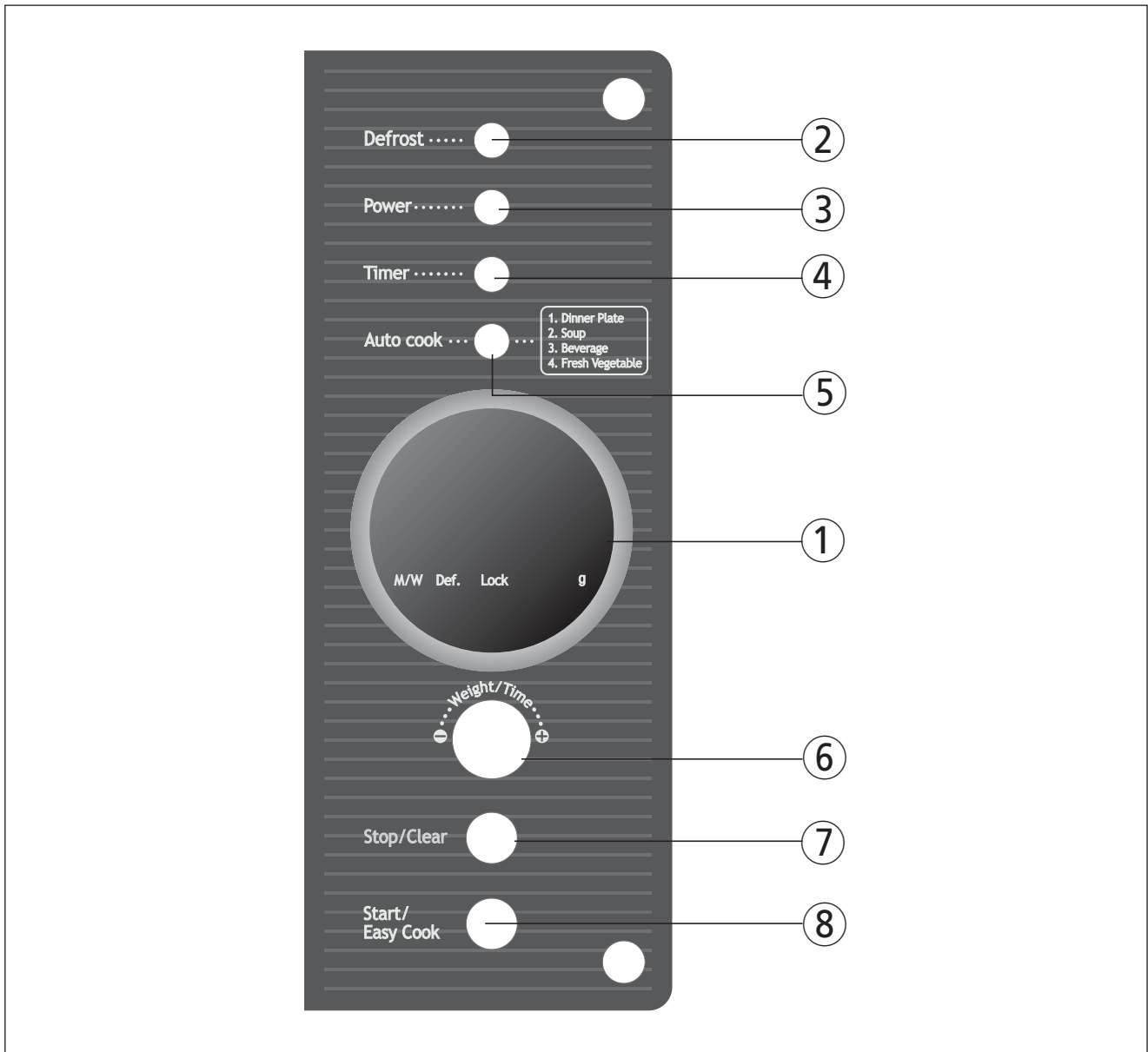


## 2. FEATURE DIAGRAM



- ① **Door latch**-When the door is closed it will automatically shut off. If the door is opened while the oven is operating, the magnetron will automatically shut off.
- ② **Door seal**-The door seal surfaces prevent microwaves escaping from the oven cavity.
- ③ **Oven cavity**
- ④ **Spatter shield**-Protects the microwave outlet from splashes of cooking foods.
- ⑤ **Safety interlock system**-Prevents the oven from operating while the door is opened.  
The oven will only operate with the door fully closed. When the door is open, the oven turns off and will only start again after the door is closed.
- ⑥ **Control panel**
- ⑦ **Glass cooking tray**-Made of special heat resistant glass. The tray can be easily removed for cleaning. Make sure it is correctly positioned (indentation) before operating. Place food in a suitable container (dish) on the tray.
- ⑧ **Roller guide**-Supports the glass cooking tray.
- ⑨ **Door screen**-Allows viewing of food.  
The screen is transparent to light, but prevents microwaves escaping.

### 3. CONTROL PANEL



- ① **Display** - Cooking time, power level and indicators are displayed.
- ② **Defrost**- Used to defrost foods by weight or time.
- ③ **Power**- Used to set power level.
- ④ **Timer** - Used to set the timer.
- ⑤ **Auto cook**- Used to cook using a program or to reheat.
- ⑥ **Dial knob**- Used to set the time and weight.
- ⑦ **Stop/Clear**- Used to stop the oven operation or to erase all entries.
- ⑧ **Start/Easy cook**-Used to start the oven operation and also increase the reheat time by 30 seconds.

# INSTALLATION

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## 1. Steady, flat location

This microwave oven should be set on a steady, flat surface.

This microwave oven is designed for counter top use only.

## 2. Leave space behind and side

All air vents should be kept a clearance. If all vents are covered during operation, the oven may overheat and, eventually, cause failure.

## 3. Away from radio, and TV sets

Poor television reception and radio interference may result if the oven is located close to a TV, radio, antenna, or feeder and so on. Position the oven as far from them as possible.

## 4. Away from heating appliances and water taps

Keep the oven away from hot air, steam or splash when choosing a place to position it, or the insulation might be adversely affected and breakdowns occur.

## 5. Power supply

- Check your local power source.  
This microwave oven requires a current of approximately 6 amperes, 230 Volts, 50 Hz.
- Power supply cord is about 0.8 meters long.
- The voltage used must be the same as specified on this oven. Using a higher voltage may result in a fire or other accident causing oven damage. Using low voltage will cause slow cooking. We are not responsible for damage resulting from use of this oven with a voltage of ampere fuse other than those specified.
- This appliance is supplied with cable of special type, which, if damaged, must be repaired with cable of same type. Such a cable can be purchased from DAEWOO and must be installed by a qualified person.

## 6. Examine the oven after unpacking for any damage such as:

A misaligned door, broken door or a dent in cavity.

If any of the above is visible, DO NOT INSTALL, and notify dealer immediately.

## 7. Do not operate the oven if it is colder than room temperature

(This may occur during delivery in cold weather.) Allow the oven to become room temperature before operating.

## EARTHING INSTRUCTIONS

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

### WARNING

Improper use of the earthing plug can result in a risk of electric shock. Consult a qualified electrician or service-man if the earthing instructions are not completely understood, or if doubt exists as to whether the appliance is properly earthed, and either : If it is necessary to use an extension cord, use only a 3-wire extension cord that has a 3-blade earthing plug, and a 3-slot receptacle that will accept the plug on the appliance. The marked rating of the extension cord should be equal to or greater than the electrical rating of the appliance, or Do not use an extension cord.



# OPERATION PROCEDURE

- 1) Connect the mains lead to an electrical outlet.
- 2) Open the oven door once to use the oven. The display lights up and the oven is ready to work.
- 3) After placing the food in a suitable container, open the oven door and put it on the glass tray.  
The glass tray must always be in place during cooking.
- 4) Close the door firmly.
- 5) The oven door can be opened at any time during operation by pulling the door.  
The oven will automatically shut off. To restart the oven, close the door and then press START button.
- 6) Each time a button is pressed. a BEEP will sound.
- 7) The oven will be turned off automatically when not in use for 10minutes after working. Open the oven door for using the oven and then its display will turn on again.
- 8) When STOP/CLEAR button is pressed during the oven operation, the oven stops cooking and all information retained.  
To erase all information, press STOP/CLEAR button once more. If the oven door is opened during the oven operation, all information is retained.
- 9) If START button is pressed and the oven does not operate, check the area between the door and door is closed securely.  
The oven will not start cooking under the door is completely closed or the program has been reset.

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

## Wattage output chart

- The power-level is set by pressing POWER button. The chart shows the display, the power level and the percentage of power.

Press POWER button	Power level (Display)	Approximate Percentage of Power
once	P-HI	100%
twice	P-80	80%
3 times	P-60	60%
4 times	P-40	40%
5 times	P-20	20%

# 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 earthing.

Do not operate on a two-wire extension cord.

The microwave oven is designed to be used while earthed.

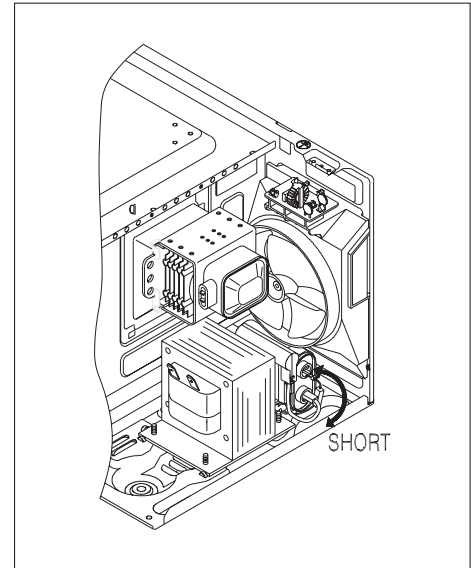
It is imperative, therefore, to make sure it is earthed properly before beginning repair work.

(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 12A 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.

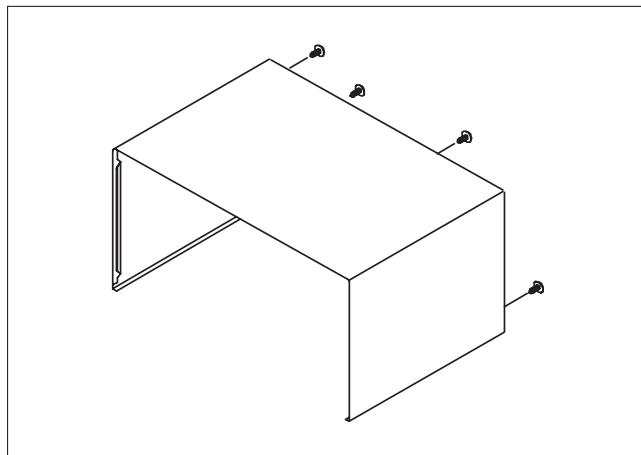


**CAUTION** : Service personnel should remove their watches whenever working close to or replacing the magnetron.

**WARNING** : When servicing the appliance, need a care of 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, HV fuse.

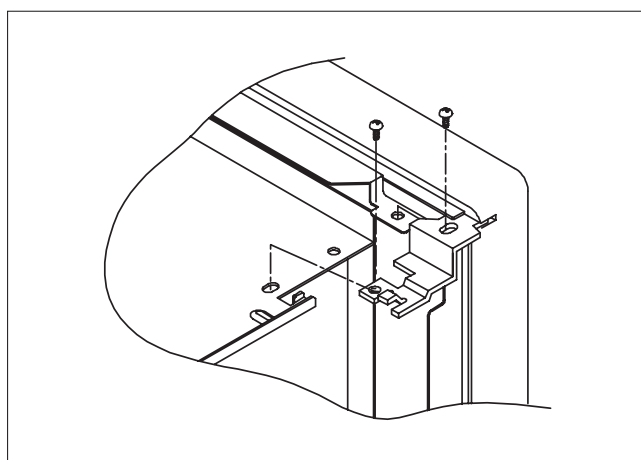
## 1. To remove cabinet

- 1) Remove four screws on cabinet back.
- 2) Pull the cabinet backward.



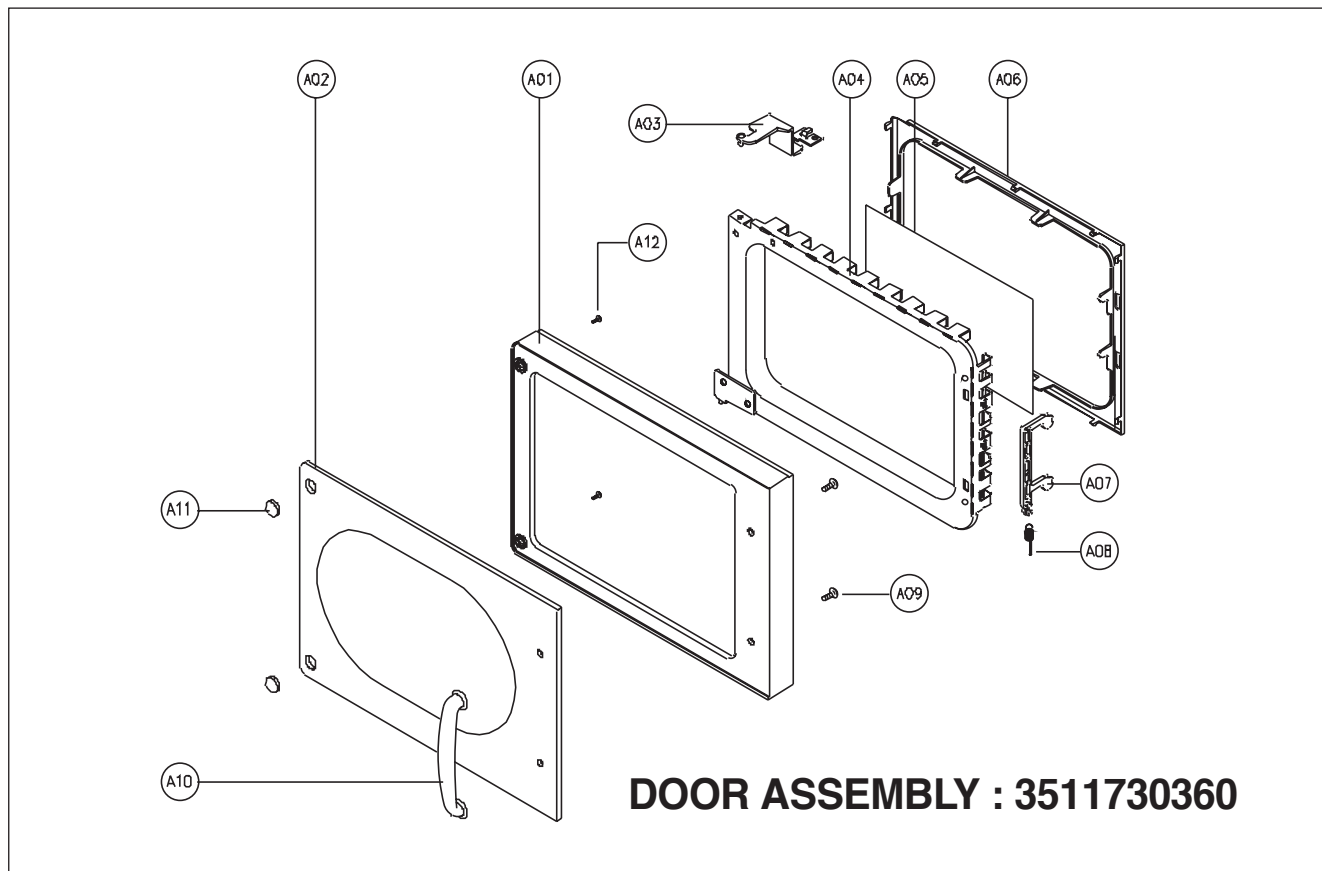
## 2. To remove door assembly

- 1) Remove two screws which secure the stopper hinge top.
- 2) Remove the door assembly from top plate of cavity.
- 3) Reverse the above for reassembly.



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

### 3. To remove door parts.

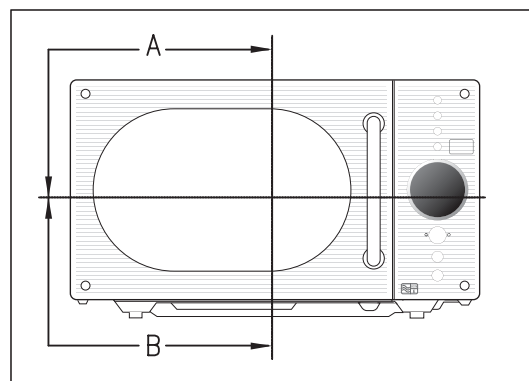


REF No.	PART CODE	PART NAME	DESCRIPTION	Q'TY	REMARK
A01	3512212900	FRAME DOOR	ABS SG-0760D SG-175	1	
A02	3517013200	BARRIER-SCREEN *O	PMMA T1.5	1	
A03	3515204120	STOPPER HINGE *T AS	KOR-6L0B1A	1	
A04	3511706130	DOOR PAINTING AS	KOR-6L0B1A	1	
A05	3517003700	BARRIER-SCREEN *I	PE T0.1	1	
A06	3512302700	GASKET DOOR	PP	1	
A07	3513100750	HOOK	POM	1	
A08	3515102000	SPRING HOOK	PW1	1	
A09	7122401211	SCREW TAPPING	T2S TRS 4X12 MFZN	2	
A10	3512604100	HANDLE DOOR	ABS	1	
A11	3511607210	DECORATOR CAP	ABS SG-0760D SG-175 COAT	2	
A12	7121300811	SCREW TAPPING	T2S PAN3X8 MFZN	2	

- (1) Remove the gasket door from door as.
- (2) Remove the barrier screen inner door painting as.
- (3) Remove the door frame from door painting as.
- (4) Remove the stopper hinge top from door painting as.
- (5) Remove the spring and the hook.
- (6) Remove handle door from door frame.
- (7) Remove two decorator cap from door frame.
- (8) Remove the barrier screen outer from door frame.
- (9) Reverse the above steps for reassembly.

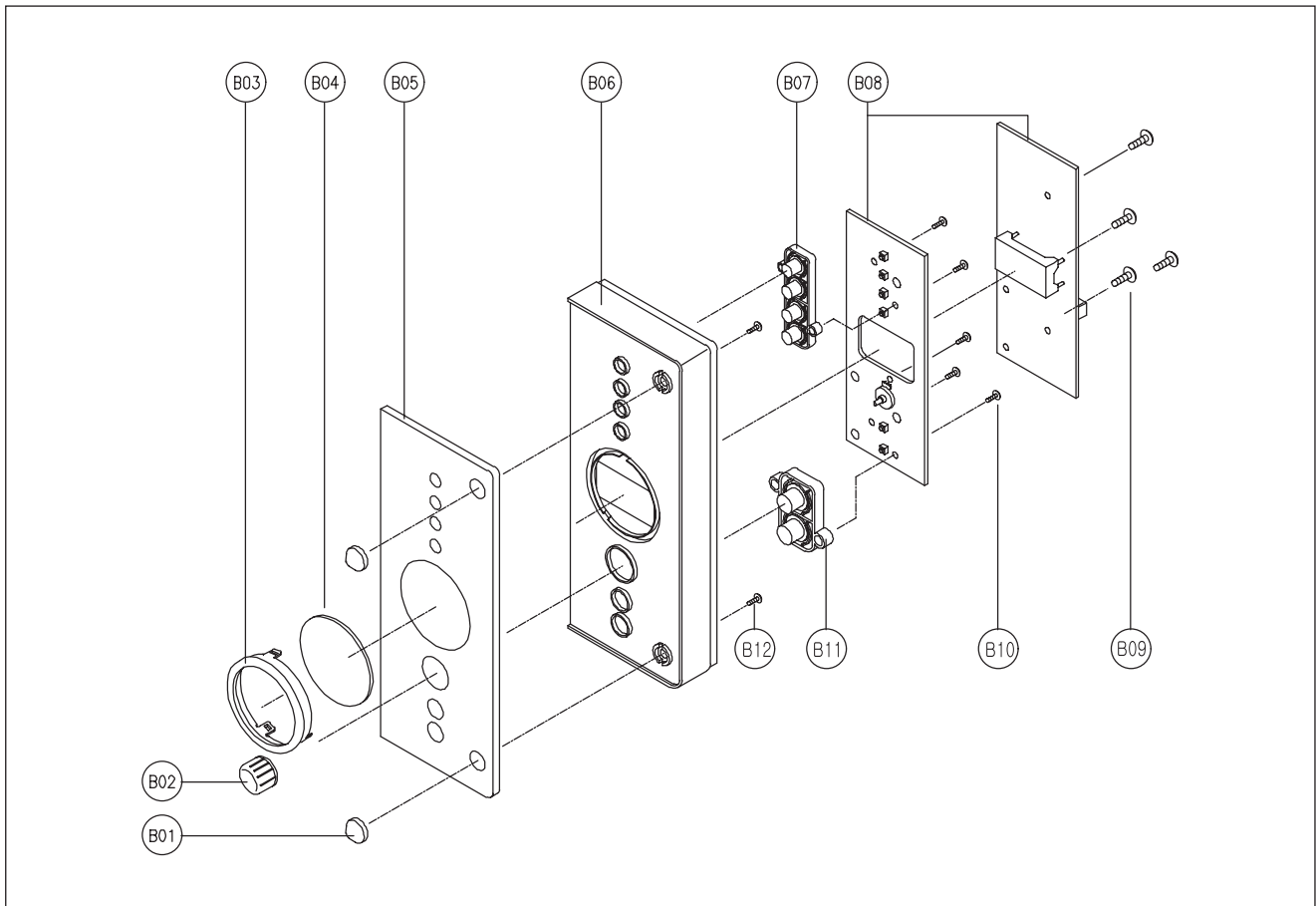
#### 4. Method to reduce the gap between the door seal and the oven front surface.

- (1) To reduce gap located on part 'A' Loosen the screw on stopper hinge top, and then push the door to contact the door seal to oven front surface. Tighten the screw.
- (2) To reduce gap located on part 'B' Loosen the screw on stopper hinge under, and then push the door to contact the door seal to oven front surface. Tighten the screw.



**NOTE :** A small gap may be acceptable if the microwave leakage does not exceed  $4\text{mW}/\text{cm}^2$ .

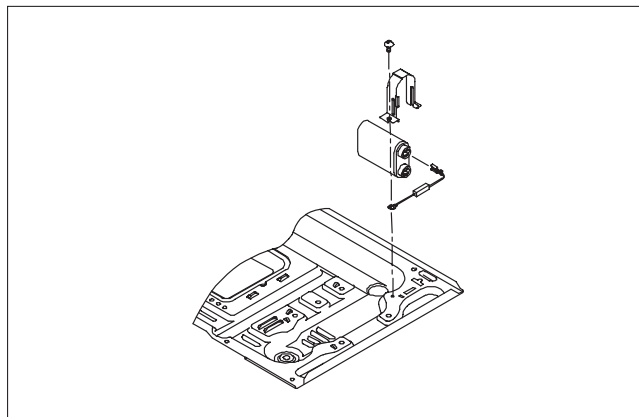
## 5. To remove control panel parts.



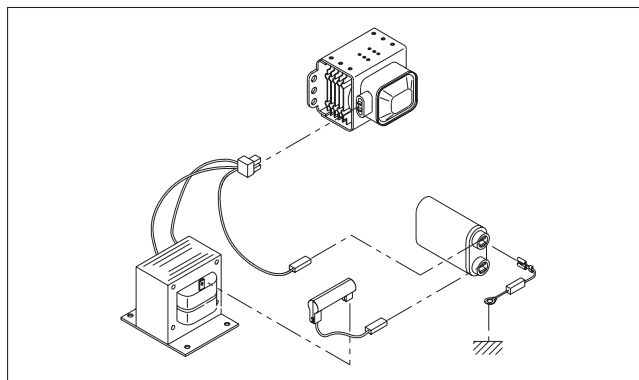
REF No.	PART CODE	PART NAME	DESCRIPTION	Q'TY	REMARK
B01	3511607210	DECORATOR CAP	ABS SG-0760D SG-175 COAT		
B02	3513403840	KNOB VOLUME	ABS SG-0760D SG-175 COAT		
B03	3511607110	DECORATOR RING	ABS SG-0760D SG-175 COAT		
B04	3515501700	WINDOW DISPLAY	SAN		
B05	3511620570	DECORATOR C-PANEL	PMMA T1.5		
B06	3516743300	CONTROL PANEL	ABS SG-0760D SG-175		
B07	3516922270	BUTTON FUNCTION-A	ABS SG-0760D SG-175 COAT		
B08	PKMPMSFM80	PCB MAIN MANUAL AS	KOR-6L9R5S		
B09	7122401211	SCREW TAPPING	T2S TRS 4X12 MFZN		
B10	7621301011	SCREW TAPPING	T2 PAN 3X10 PW MFZN		
B11	3516909840	BUTTON FUNCTION-B	ABS SG-0760D SG-175 COAT		
B12	7621301011	SCREW TAPPING	T2 PAN 3X10 PW MFZN		

## 6. To remove high voltage capacitor.

- 1) Remove the screw which secures the earthing 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.

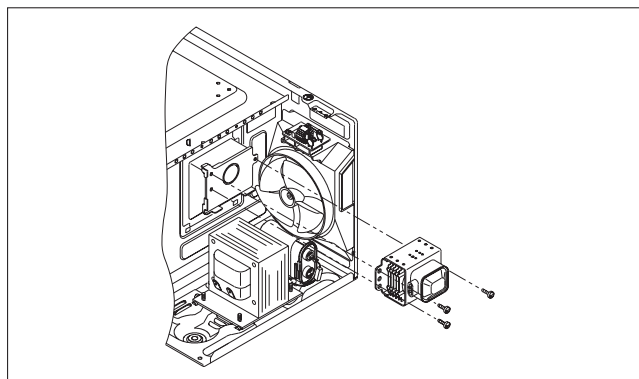


## ◆ High voltage circuit wiring

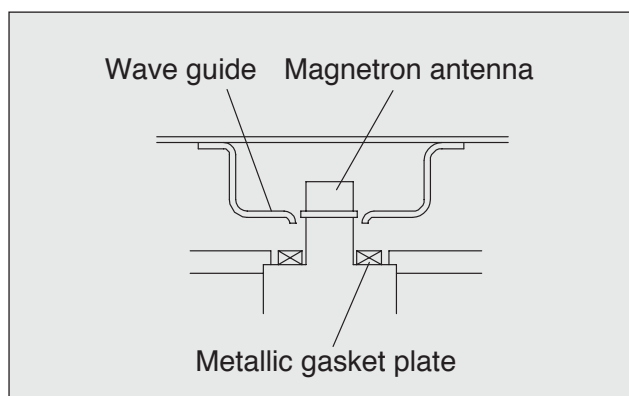
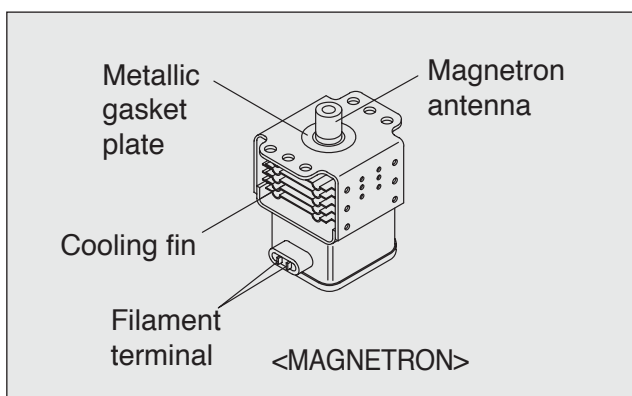


## 7. To remove magnetron.

- 1) Remove three screws which secure the magnetron.
- 2) Remove the magnetron.
- 3) Reverse the above steps for reassembly.

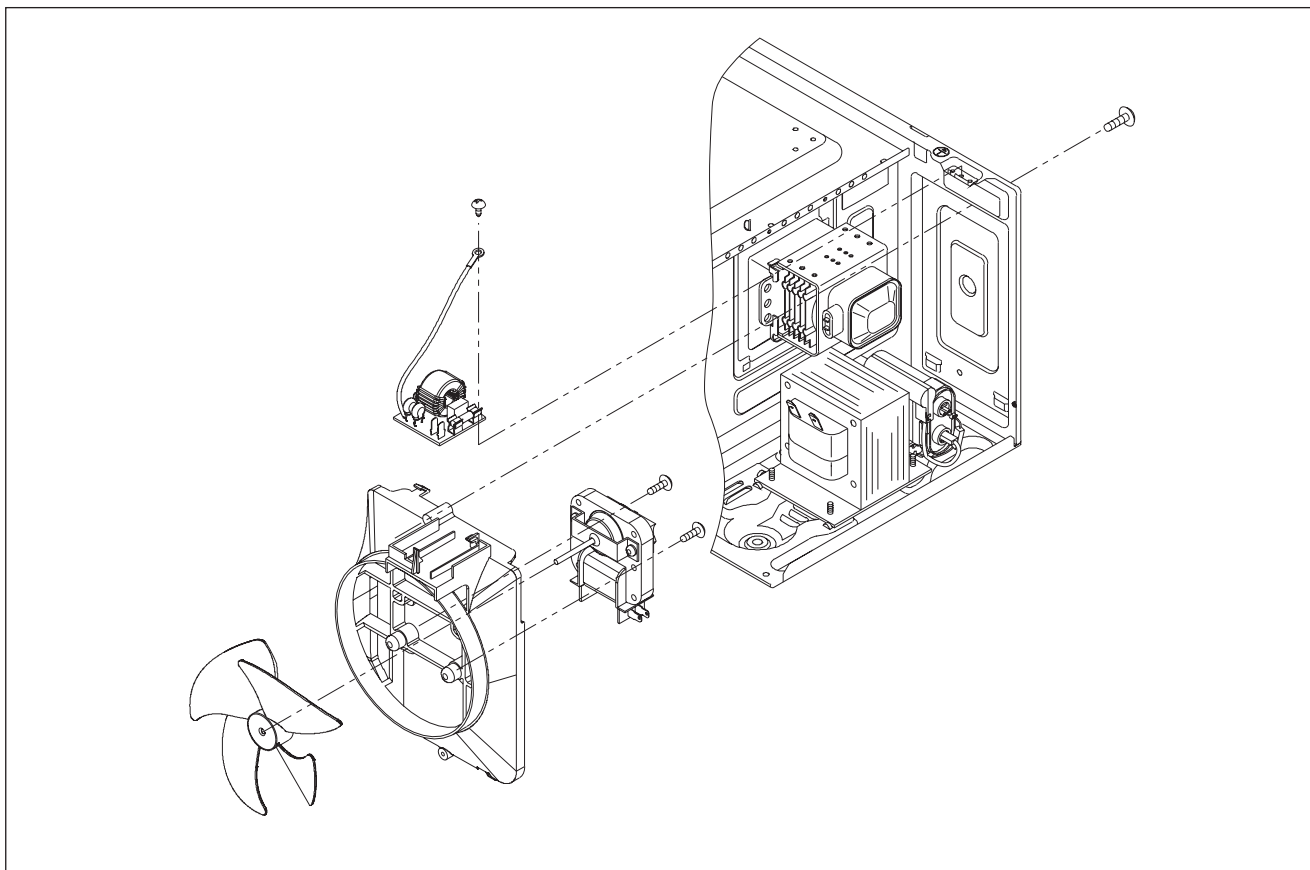


**NOTE :** Never install the magnetron without the metallic gasket plate which is packed with each magnetron to prevent microwave leakage. Whenever repair work is carried out on magnetron, check the microwave leakage. It shall not exceed 4mW/cm<sup>2</sup> for a fully assembled oven with door normally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



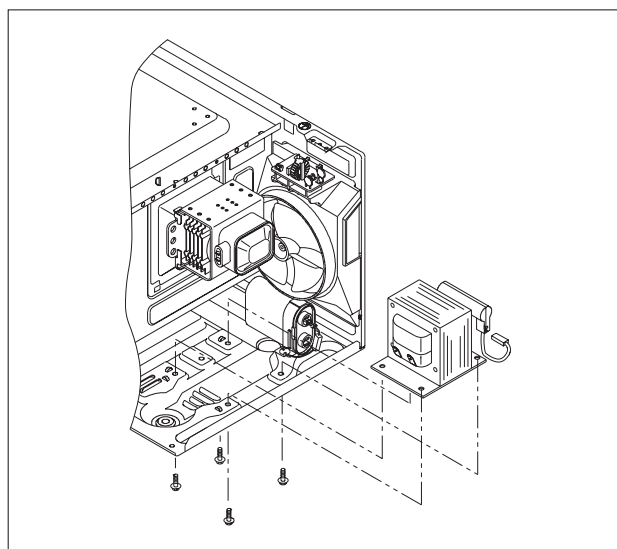
## 8. To remove wind guide assembly.

- 1) Remove the screw for earthing.
- 2) Remove the noise filter from the wind guide.
- 3) Remove the screw which secures 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.



## 9. To remove H.V.transformer.

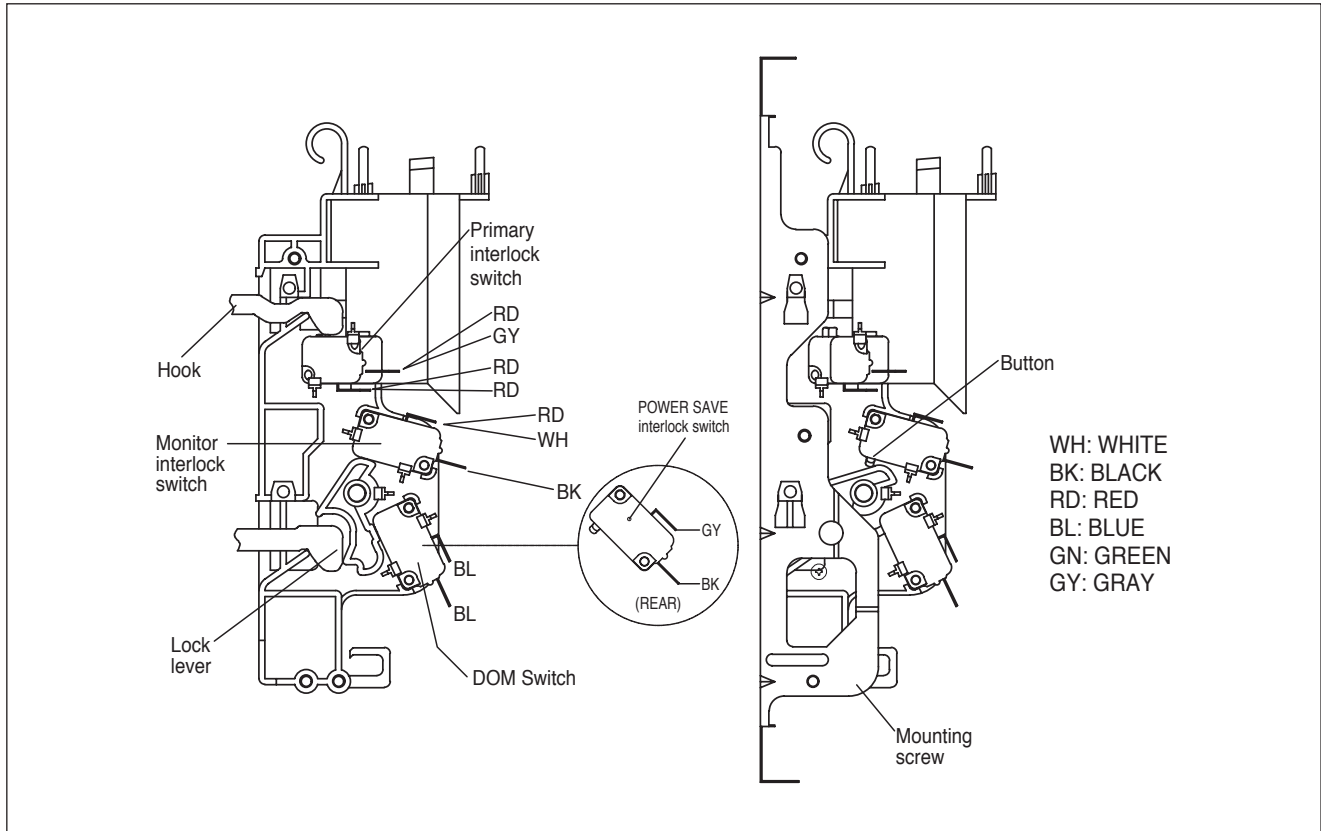
- 1) Remove four screws holding the H.V.transformer.
- 2) Remove the H.V.transformer.
- 3) Reverse the above steps for reassembly.





# 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 brings it under "ON" condition.

## (2) Secondary(Power save) 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 shall be adjusted almost 0mm.
- Make sure that lock lever moves smoothly after adjustment is completed.
- Tighten completely a mounting screw.

### NOTE :

Microwave emission test should be performed after adjusting interlock mechanism. If the microwave emission exceeds 4mW/cm<sup>2</sup>, readjust interlock mechanism.

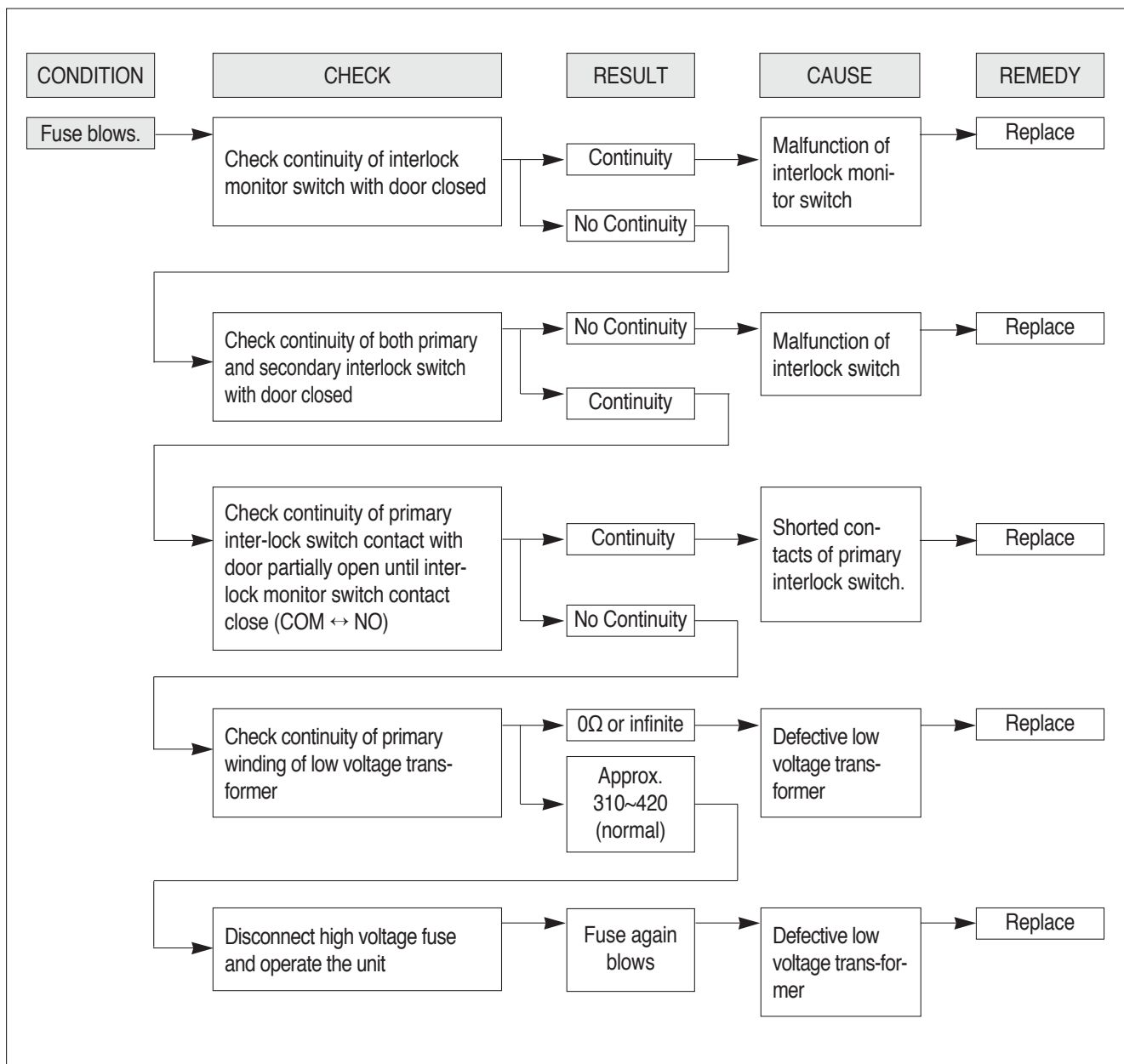
# TROUBLESHOOTING GUIDE

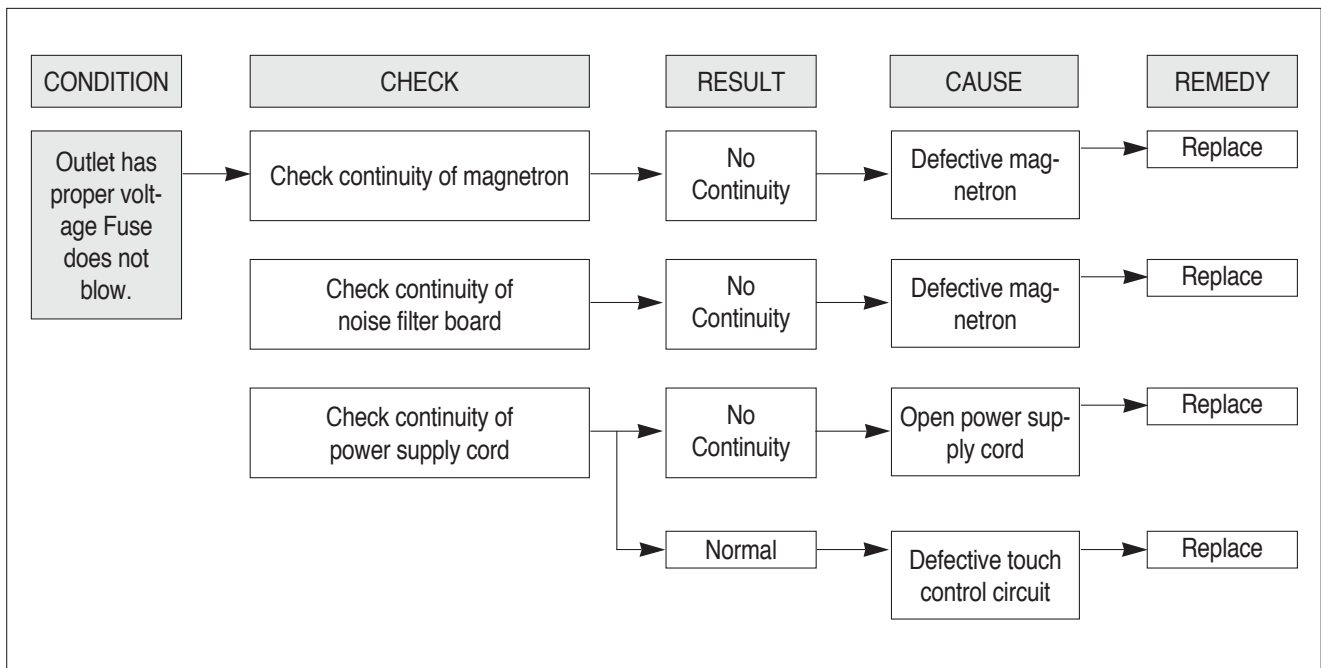
Following the procedure below to check if the oven is defective or not.

1. Check earthing 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 connected of the terminals and power cord before check the parts listed below.

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

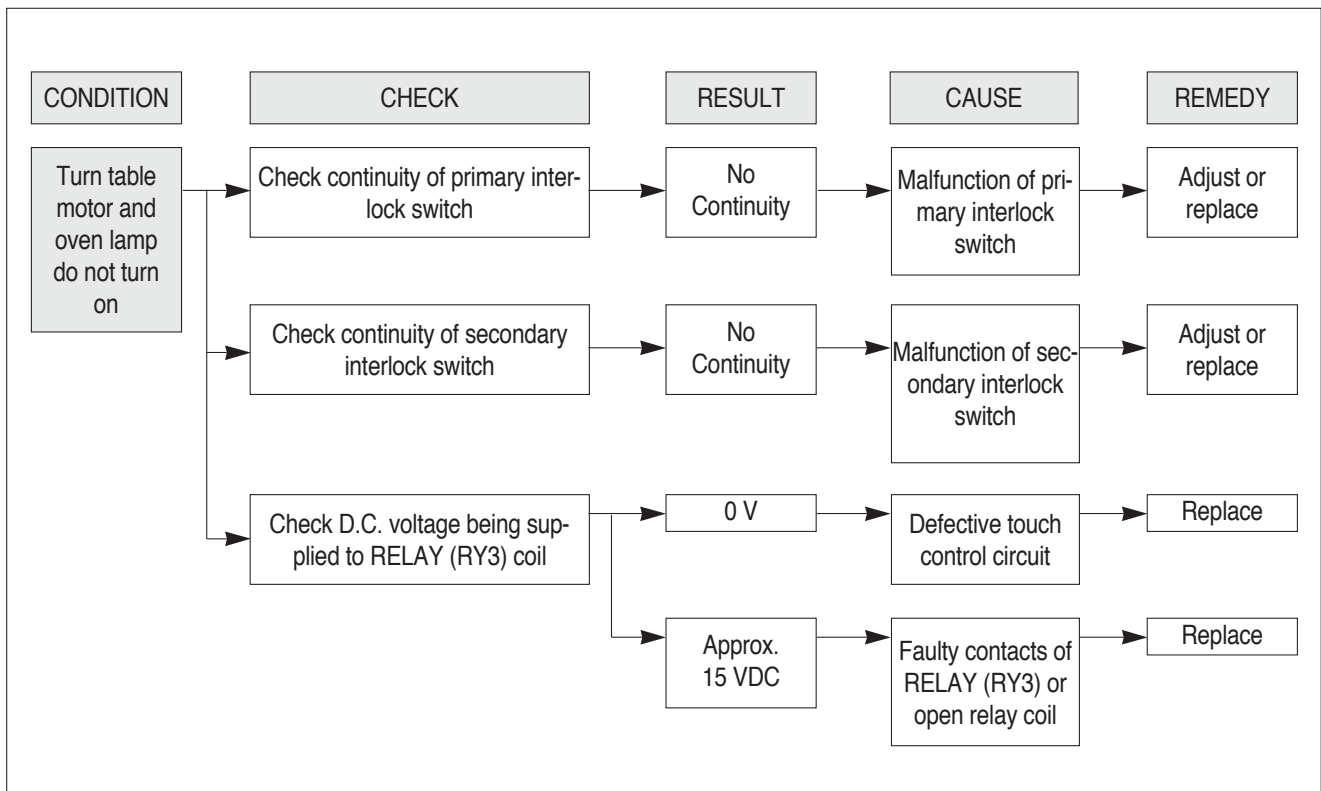




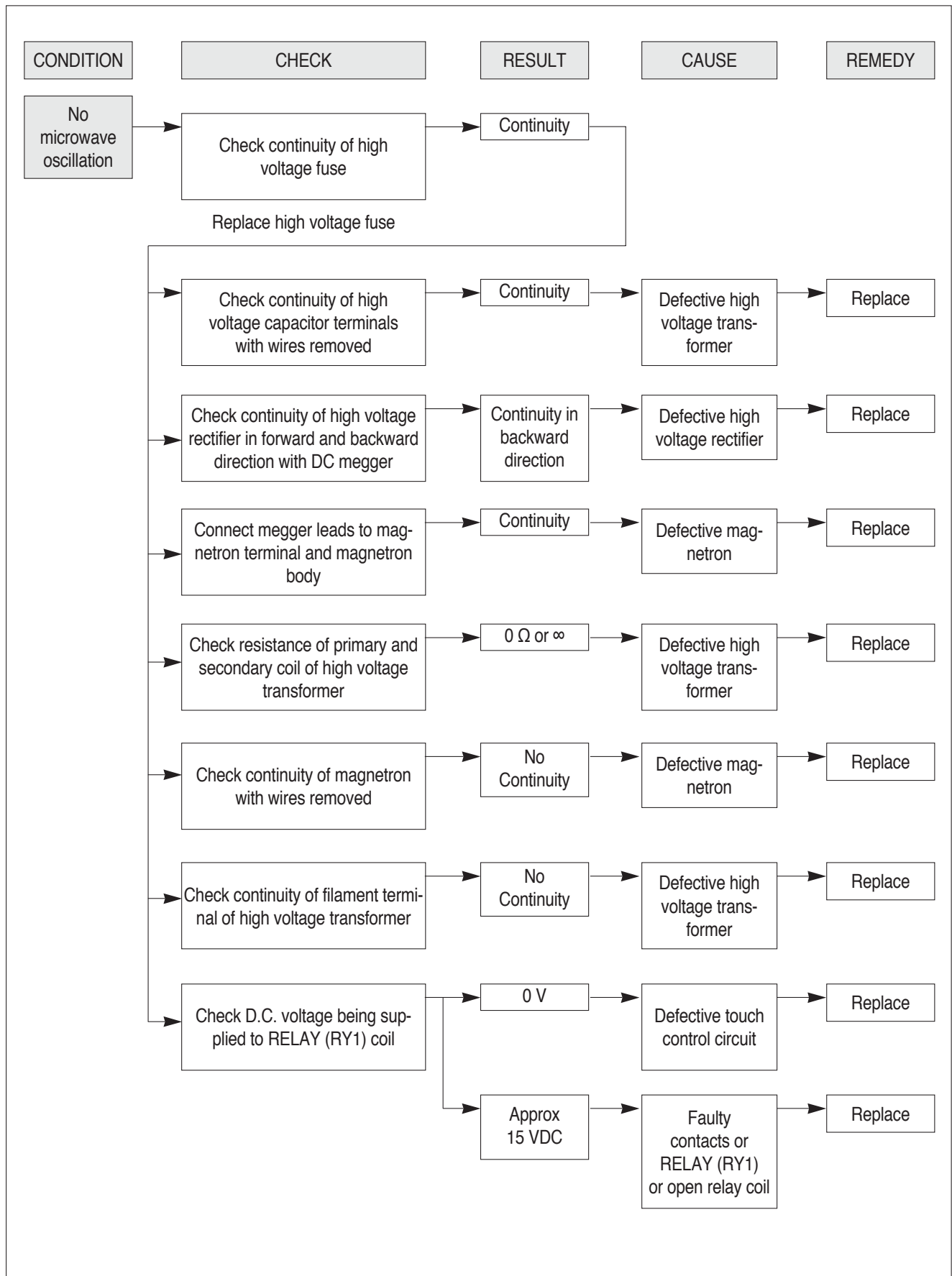
#### NOTE 1

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 START button is tapped.

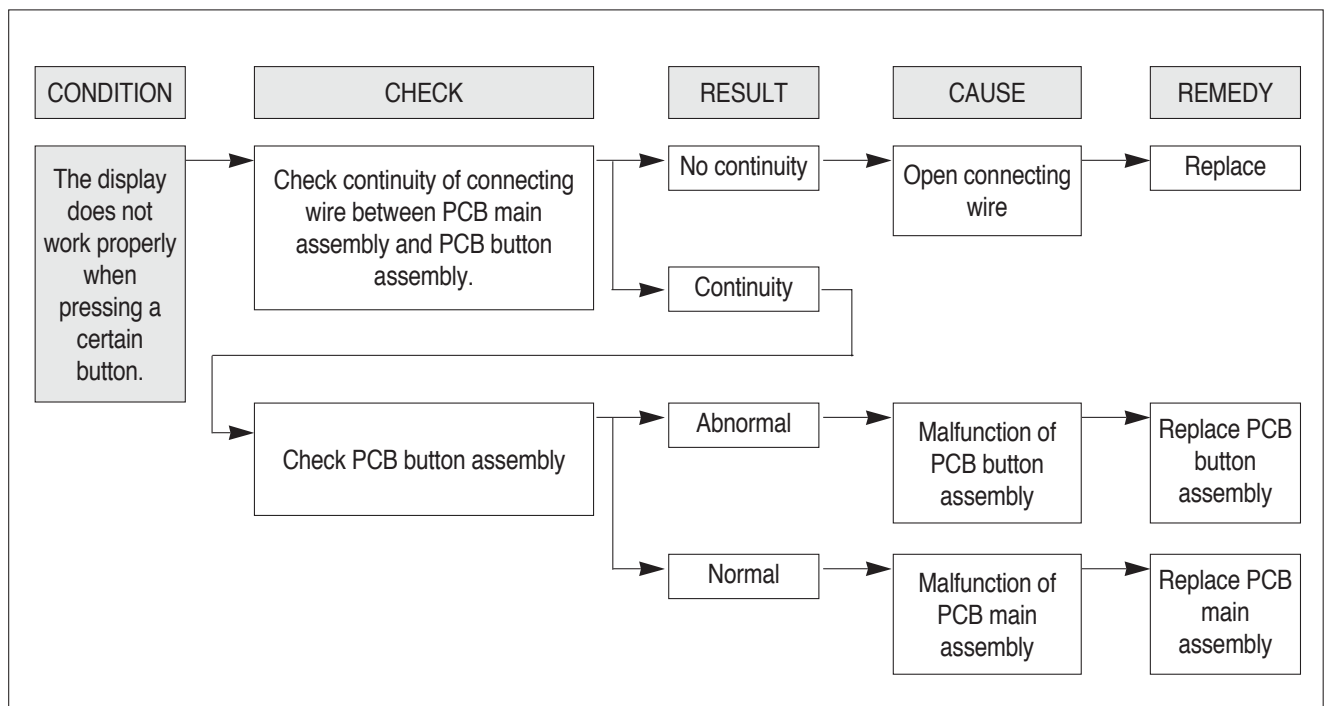
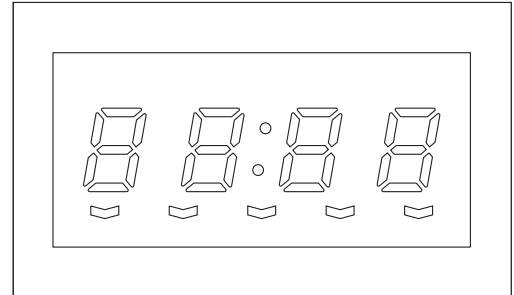


**(TROUBLE 3) No microwave oscillation even though fan motor rotates.**

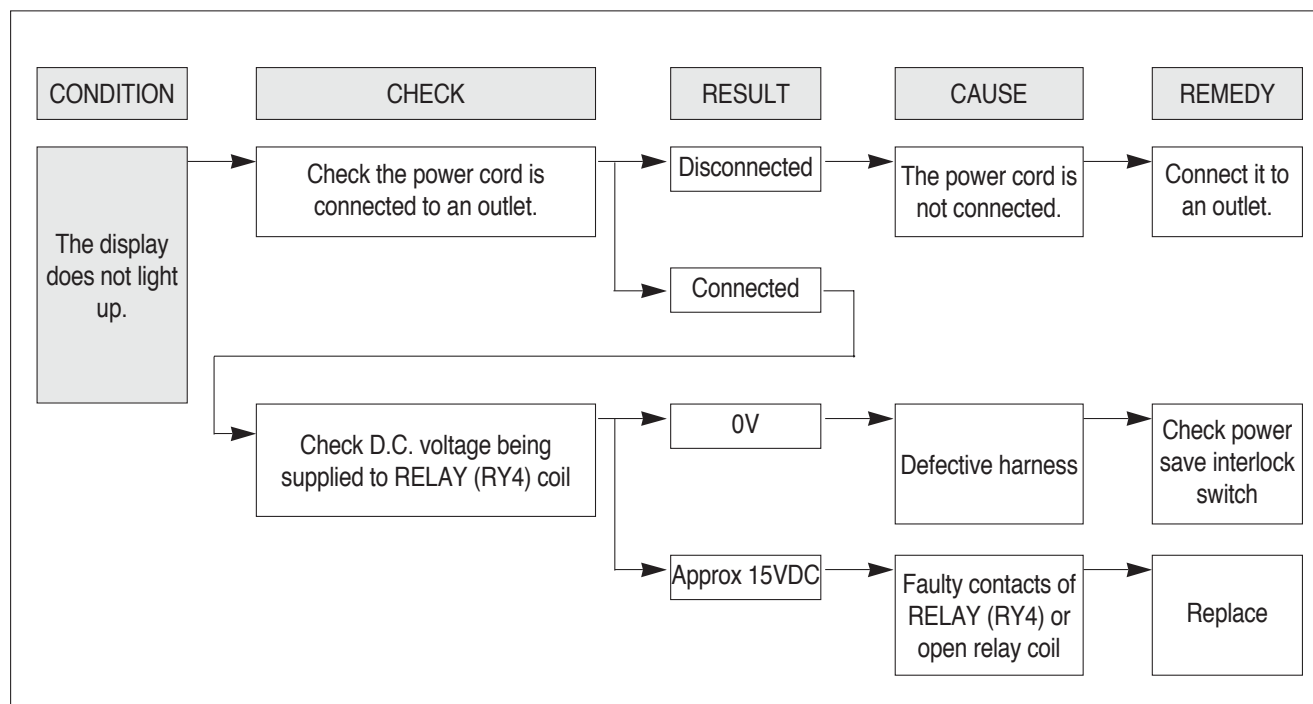


**(TROUBLE 4)** The following visual problems are caused by a defective control circuit.

1. Incomplete segments,
  - 1) Segments missing.
  - 2) Partial segments missing.
  - 3) Digit flickering other than normal display slight flickering.
2. No display changes when pressing a certain button.
3. Overlapped digits each other when pressing a couple of number buttons
4. Cooking time does not count down properly during working.
5. Time counting speed is too fast or too late.
6. Oven lamp or turntable motor does not stop working when cooking is over.  
Check if there is something wrong with RELAY (RY3).



**(TROUBLE 5)** When opening the oven door for using the oven, the display doesn't light up and no beep.



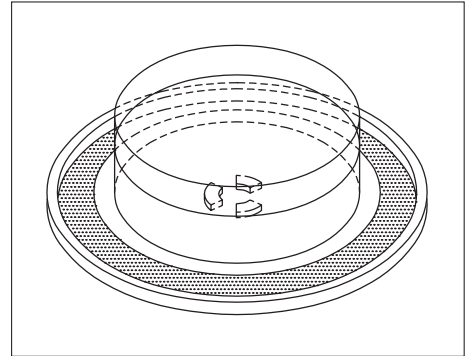
# MEASUREMENT AND TEST

## 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. Microwave power output measurement is made with the microwave oven supplied at rated voltage and operated at its maximum microwave power setting with a load of  $1000 \pm 5$ cc of potable water.
2. The water is contained in a cylindrical borosilicate glass vessel having a maximum material thickness of 3 mm and an outside diameter of approximately 190 mm.
3. The oven and the empty vessel are at ambient temperature prior to the start of the test.  
The initial temperature of the water is  $10 \pm 2^\circ\text{C}$  ( $50 \pm 3.6^\circ\text{F}$ )  
It is measured immediately before the water is added to the vessel.  
After addition of the water to the vessel, the load is immediately placed on the center of the shelf, which is in the lowest normal position.
4. Microwave power is switched on.
5. Heating time should be exactly **A** seconds. (Refer to table as following)  
Heating time is measured while the microwave generator is operating at full power.  
The filament heat-up time for magnetron is not included.
6. The initial and final temperature of water is selected so that the maximum difference between the ambient and final water temperature is 5K.
7. The microwave power output P in watts is calculated from the following formula :



$$P = 4187 \times \Delta T / t$$

- $\Delta T$  is difference between initial and ending temperature.
  - $t$  is the heating time.
- The power measured should be B (Refer to SPECIFICATIONS)  $W \pm 10.0\%$ .

### CAUTION :

1. Water load should be measured exactly to 1 liters.
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:

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

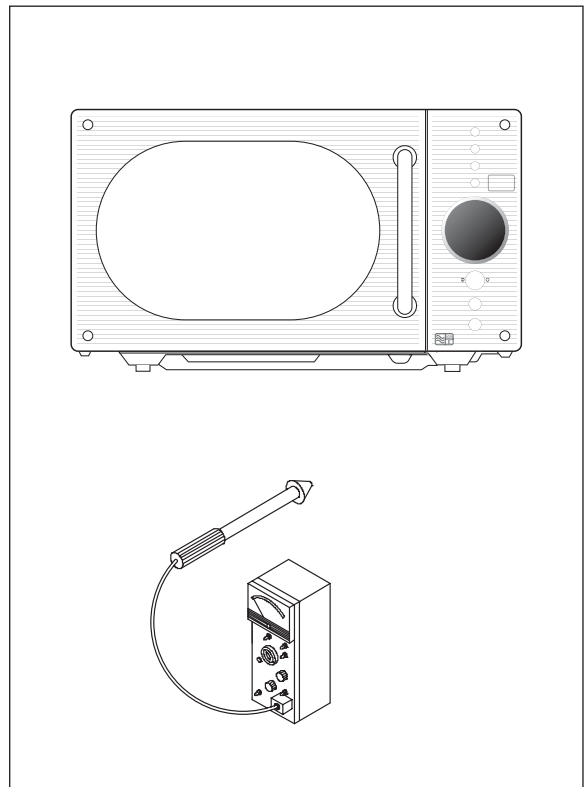
## 2. MICROWAVE RADIATION TEST

### 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.

### PROCEDURE

1. Prepare Microwave Energy Survey Meter, 600cc glass beaker, and glass thermometer 100°C (212°F).
2. Pour 275cc  $\pm$  15cc of tap water initially at 20  $\pm$  5°C (68  $\pm$  9°F) in the 600 cc glass beaker with an inside diameter of approx. 95 mm(3.5 in.).
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 pre-scribed below. Leakage for a fully assembled oven with door normally closed must be less than 4mW/cm<sup>2</sup>.
  - 2) When measuring the leakage, always use the 5 cm (2 in.) 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 seem, door viewing screen, the exhaust air vents and the suction air vents.
  - 3) Measuring should be in a counter-clockwise direction at a rate of 1 in./sec. If the leakage of the cabinet door seem 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 it does not, erroneous reading may result.





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### 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.  $140\ \Omega \pm 10\%$
  - Filament winding Approx.  $0\ \Omega$
  - Primary winding Approx.  $2\ \Omega$

#### 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.

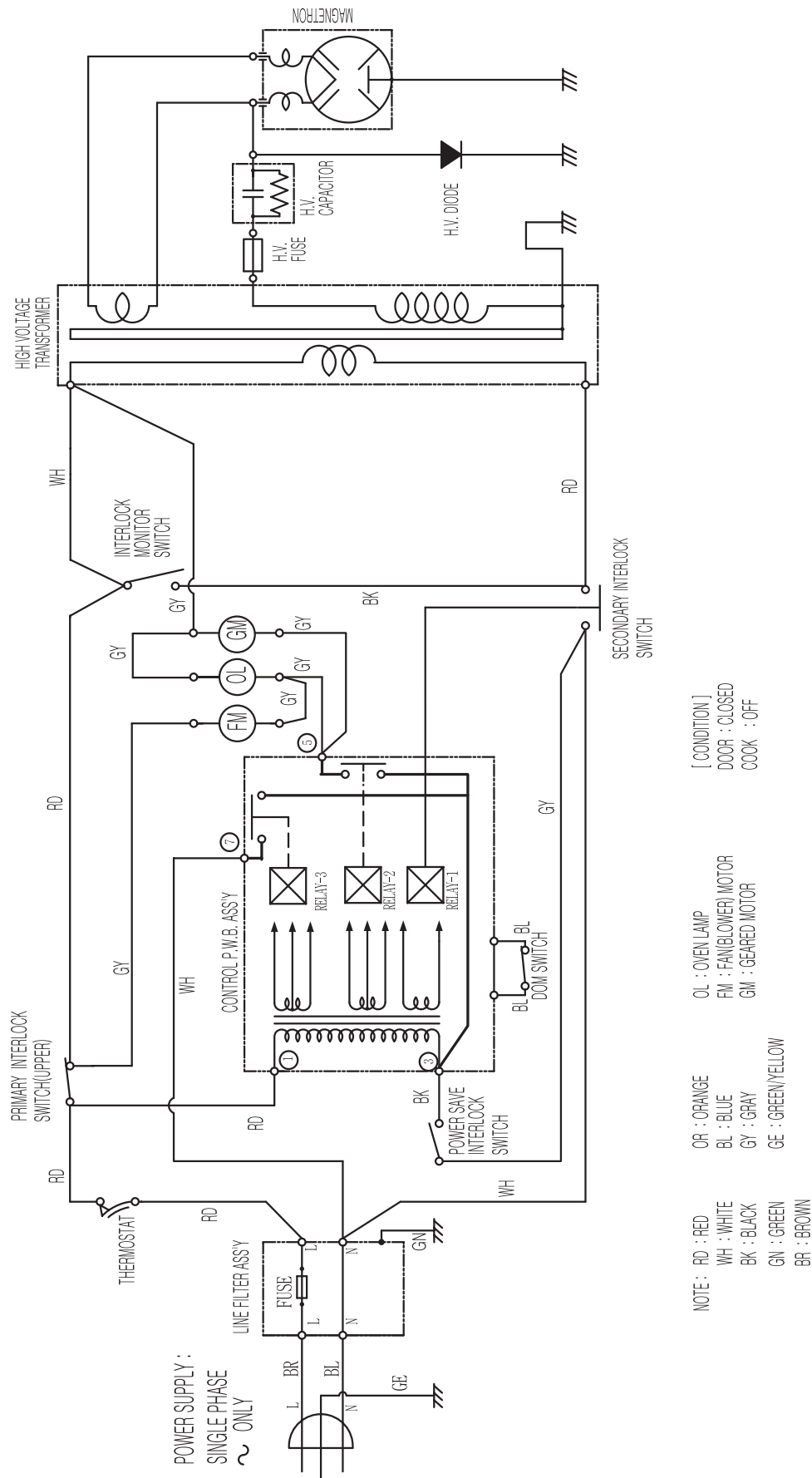
In case the fuse is blown by an improper switch operation, replace the defective switch and fuse at the same time.

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.

# WIRING DIAGRAM



# PRINTED CIRCUIT BOARD

## 1. CIRCUIT CHECK PROCEDURE

### 1. Low voltage transformer check

The low voltage transformer is located on the P.C.B.

Measuring condition: Input voltage: 230V / Frequency: 50Hz

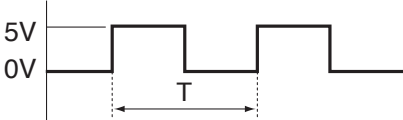
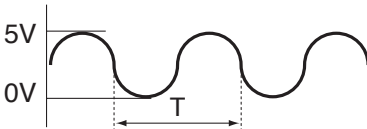
Terminal Voltage	LOAD	NO LOAD
4-6	12.6 V AC	13.6 V AC

#### NOTE

1. Refer to Circuit Diagram (point 4).
2. Secondary side voltage of the low voltage transformer changes in proportion to fluctuation of power source voltage.
3. The allowable tolerance of the secondary voltage is within  $\pm 5\%$  of nominal voltage.

### 2. Voltage Check

- Key check point

NO	CHECK POINT	REMARK
1	IC1 PIN 5	5VDC
2	IC1 PIN 22	 T : 16.67ms(60Hz)
3	IC 1 PIN 2 OR PIN 3	 T : 250 ns(4MHz)

- Check method

NO	MEASURE POINT	WAVE FORM	REMEDY	REMARK
1	MP1	5VDC	Replace VL1, EC1, C1, C2	NO LOAD
2	MP2	12VDC	Replace EC2, D10, D12, D13, C7	NO LOAD

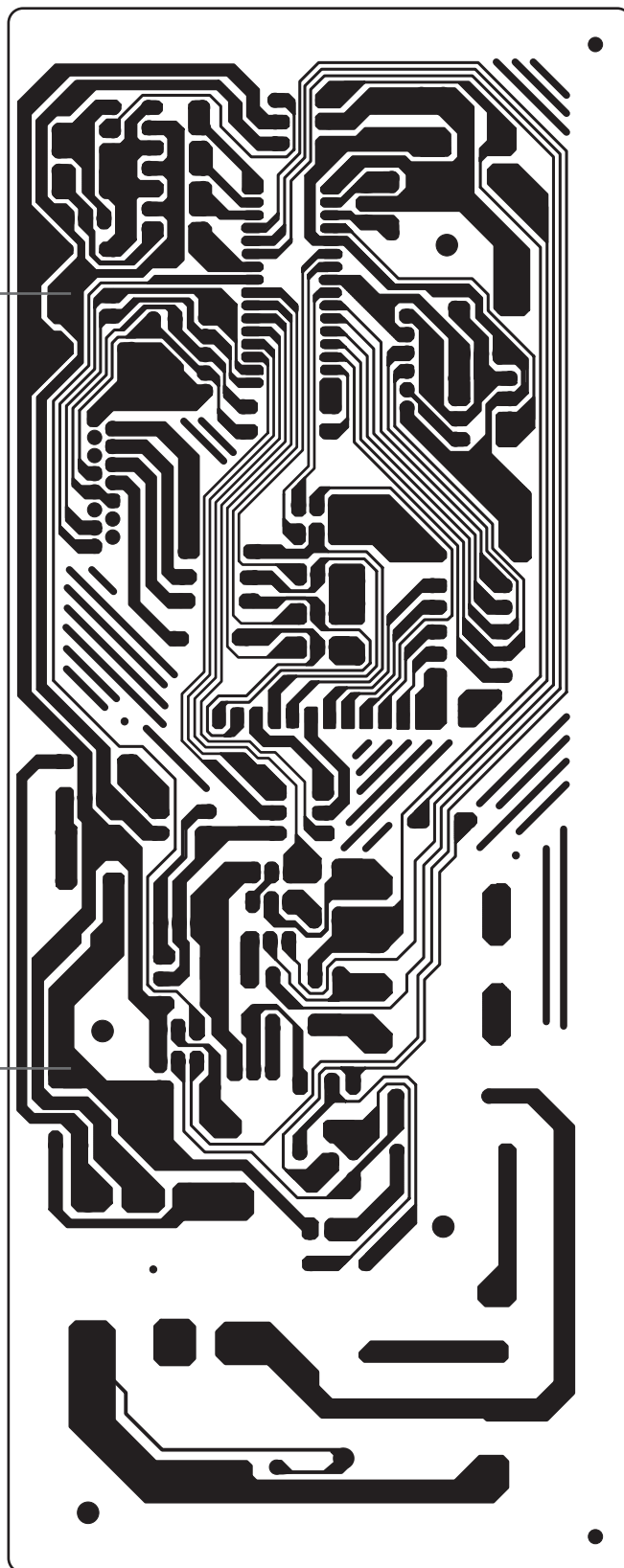
#### NOTE

Each measure point must be measured with GND points.

• PCB MAIN

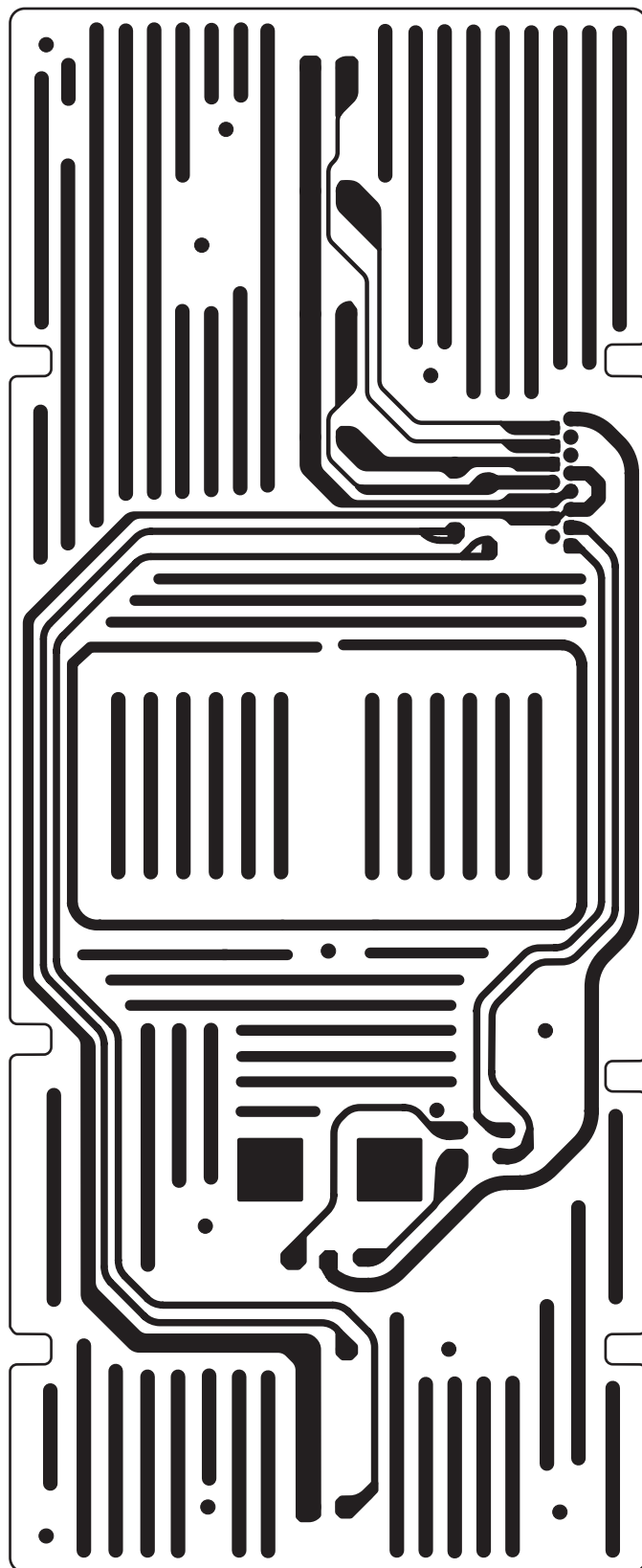
MP1

MP2



measurement point

• PCB SUB



---

**3. When pressing START button, the magnetron does not work.**

The oven lamp does not turn on and Fan moter does not rotate, but cooking time is counting down.

- Cause : There is something wrong with RELAY 3. Refer to circuit diagram (point 3).

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

**4. When pressing START button, the magnetron does not work.**

The oven lamp turns on, fan moter rotates and cooking time is counting down.

- Cause : There is something wrong with RELAY 1. Refer to circuit diagram (point 2).

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

**5. When the oven door is open during operation, cooking time does not stop counting down.**

- Cause : There is something wrong with D.O.M circuit part. Refer to circuit diagram (point 1).

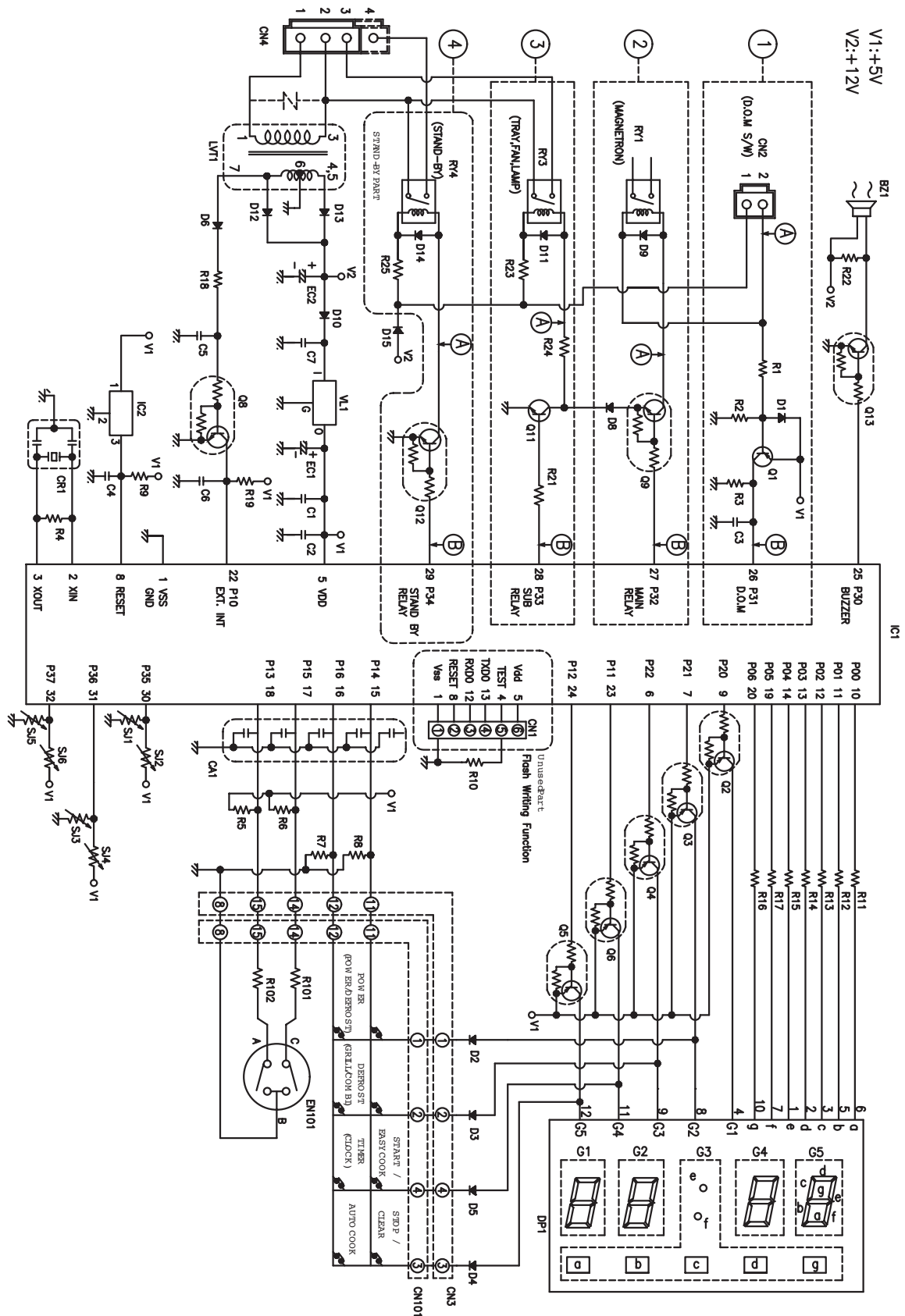
STATE \ POINT	A	B
DOOR OPEN	GND	5V
DOOR CLOSED	12V	GND

**6. When opening the oven door for using the oven out of power save mode, the display does not turn on.**

- Cause : There is something wrong with RELAY 4. Refer to circuit diagram (point 4).

STATE \ POINT	A	B
RELAY 4 ON	GND	5V
RELAY 4 OFF	12V	GND

## 2. P.C.B. CIRCUIT DIAGRAM



### 3. P.C.B. LOCATION NO

NO	NAME	SYMBOL	SPECIFICATION	PART CODE	Q'TY	REMARK
1	BUZZER	BZ1	BM-20K (BUJEON)	3515600100	1	
2	C ARRAY	CA1	5P(4) 1000PF M 50V 2.54MM	CN4XB-102M	1	
3	C CERA	C1,4	50V B 1000PF K (AXIAL)	CCZB1H102K	2	
4	C CERA	C2,3,5~7	HIKF 50V 0.1MF Z AXIAL	CCZF1H104Z	5	
5	C ELECTRO	EC1	16V RSS 100MF (6.3X11) TP	CEXF1C101V	1	
6	C ELECTRO	EC2	25V RSS 1000MF (13X20) TP	CEXF1E102V	1	
7	CONN WAFER	CN2	YW396-02V(YEONHO)	3519150520	1	
8	CONN WAFER	CN3	HLEM15S-1	4CW215SBD0	1	
9	CONN WAFER	CN4	YW396-07AV(YEONHO)	3519150540	1	
10	DIODE	D1~6,8~11,14,15	1N4148 AUTO 52MM	DZN4148---	12	
11	DIODE	D12,13	1N4004	D1N4004---	2	
12	IC MICOM	IC1	TMP86FH09NG(FLASH)	13GL86FH09	1	
13	IC REGULATOR	VL1	MC7805C(KA7805)	1MC7805C--	1	
14	IC RESET	IC2	KIA7033AP	1K1A7033AP	1	
15	LED DISPLAY	DP1	ELF-496GWB	DDD631H--	1	
16	PCB MAIN	M361	BOARD (86X216)	3514330860	1	
17	R CARBON FILM	R1,21	1/6 4.7K OHM J	RD-AZ472J-	2	
18	R CARBON FILM	R11~17	1/6 330 OHM J	RD-AZ331J-	7	
19	R CARBON FILM	R2,18	1/6 47K OHM J	RD-AZ473J-	2	
20	R CARBON FILM	R23,25	1/4 51 OHM J	RD-4Z510J-	2	
21	R CARBON FILM	R24	1/4 100 OHM J	RD-4Z101J-	1	
22	R CARBON FILM	R3,10,19	1/6 10K OHM J	RD-AY103J-	3	
23	R CARBON FILM	R4	1/6 1M OHM J	RD-AZ105J-	1	
24	R CARBON FILM	R5~8	1/6 100K OHM J	RD-AZ104J-	4	
25	R CARBON FILM	R9,22	1/6 1K OHM J	RD-AZ102J-	2	
26	RESONATOR CERA	CR1	CRT 4.00MS	5P4R00MTS-	1	
27	SW RELAY	RY1	G5G-1A-DT 1C 1P DC12V	5SC0101123	1	
28	SW RELAY	RY3,4	CS11-12SH 1C 1P	5SC0101128	2	
29	TR	Q1	KTA1266Y- (2SA1980NYATPF)	TZTA1266Y-	1	
30	TR	Q2~6	KRA106M(AUTO)	TZRA106M--	5	
31	TR	Q11	KTC3198GR (1815GR)	TZTC3198GR	1	
32	TR	Q8,9,12,13	KRC106M(AUTO)	TZRC106M--	4	
33	TRANS POWER	LVT1	DMR-631FS	5EPV035303	1	
34	WIRE COPPER	J10	1/0.52 TIN COATING	85801052GY	1	10mm
35	WIRE COPPER	J7,9,11	1/0.52 TIN COATING	85801052GY	3	12.5mm
36	WIRE COPPER	J1~6,12~17	1/0.52 TIN COATING	85801052GY	12	7.5mm
37	R CARBON FILM	SJ3,5	1/6 1K OHM J	RD-AZ102J-	2	
38	R CARBON FILM	SJ1	1/6 4.7K OHM J	RD-AZ472J-	1	
39	R CARBON FILM	SJ2	1/6 20K OHM J	RD-AZ203J-	1	
40	CONN WAFER	CN101	HLEM15R-1	4CW215RBD0	1	
41	PCB SUB	M362	BOARD (88 X 216)	3514330910	1	
42	R CARBON FILM	R101,102	1/6 1K OHM J	RD-AZ102J-	2	
43	SW ROTARY	EN101	SDB161PVB17F123636(P=5MM)	5S10109002	1	
44	SW TACT	SW101~106	KPT-1115AM	5S50101Z93	6	
45	WIRE COPPER	J101,102	1/0.52 TIN COATING	85801052GY	2	10mm
46	WIRE FLAT	WF1	15/90 WH C	WSJ-159007	1	



# EXPLODED VIEW AND PARTS LIST

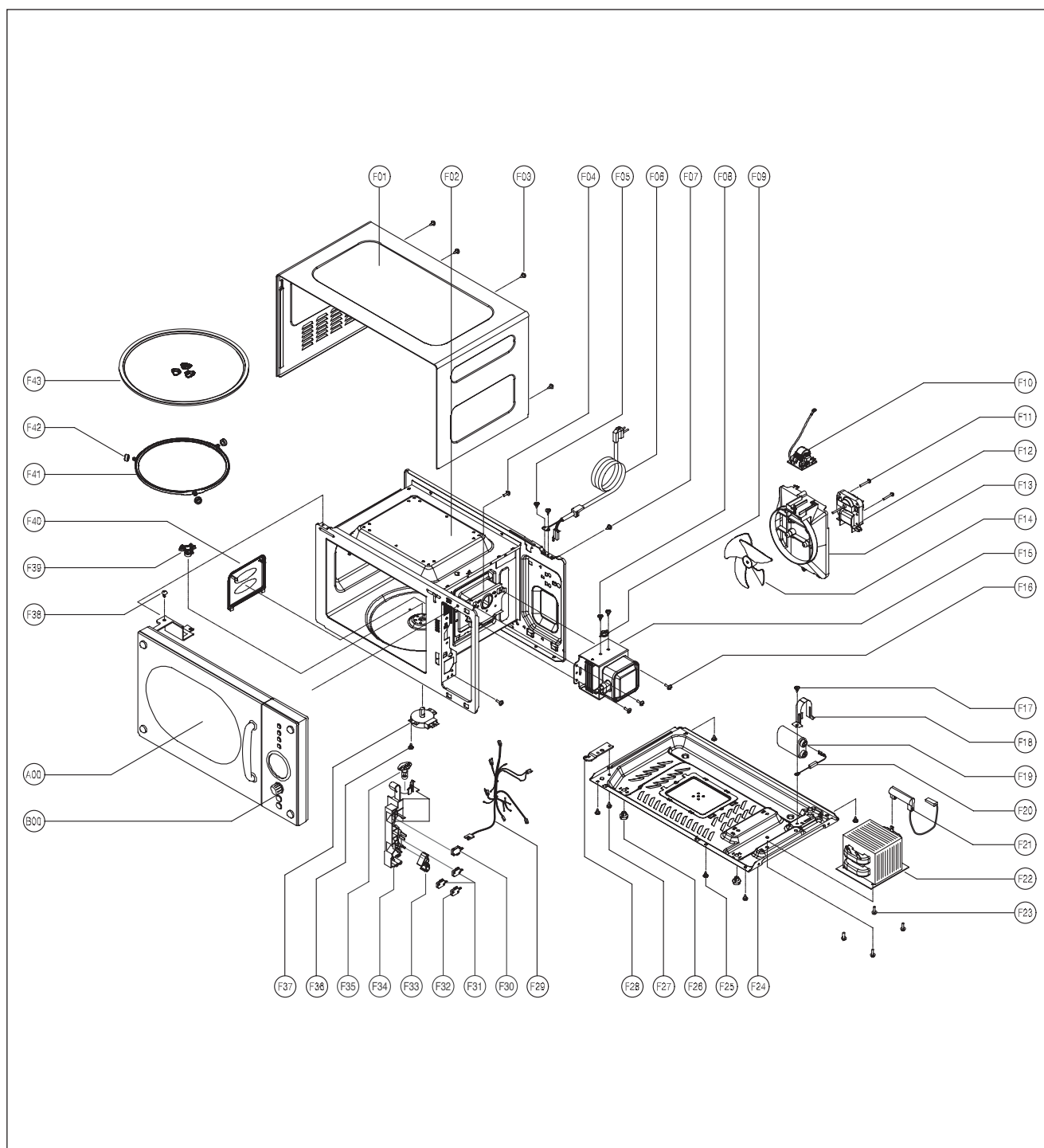
## 1. DOOR ASSEMBLY

Refer to Disassembly and assembly.

## 2. CONTROL PANEL ASSEMBLY

Refer to Disassembly and assembly.

## 3. TOTAL ASSEMBLY



✓ **Caution** : In this Manual, some parts can be changed for improving, their performance without notice in the parts list.  
So, if you need the latest parts information, please refer to PPL(Parts Price List) in Service Information Center  
(<http://svc.dwe.co.kr>).

REF NO.	PART CODE	PART NAME	DESCRIPTION	Q'TY	REMARK
A00	3511730360	DOOR AS	KOR-6L9R5S	1	
B00	PKCPSWZZZ7	C-PANEL AS	KOR-6L9R5S	1	
F01	3510808410	CABINET AS	KOR-6L0B1A	1	
F02	3516117410	CAVITY AS	KOR-6L0B1A	1	
F03	7S312X40A1	SCREW SPECIAL	T1 TRS 4X10 SE MFZN	4	
F04	7122401211	SCREW TAPPING	T2S TRS 4*12 MFZN	1	
F05	7S312X40A1	SCREW SPECIAL	T1 TRS 4X10 SE MFZN	2	
F06	35113AEQ0D	CORD POWER AS	3X0.75 70X70 100-RTML	1	
F07	7S312X40A1	SCREW SPECIAL	T1 TRS 4X10 SE MFZN	1	
F08	7121300611	SCREW TAPPING	T2S PAN 3X6 MFZN	2	
F09	3518903800	THERMOSTAT	OFF:160 ON:115 V #187	1	
F10	3518608700	NOISE-FILTER	DWLF-M12 E	1	
F11	7122402511	SCREW TAPPING	T2S TRS 4X25 MFZN	2	
F12	3963514350	MOTOR SHADED POLE	230V 50HZ MW10CA-M04	1	
F13	3512527600	GUIDE WIND	PP	1	
F14	3511800300	FAN	PP+30%GLASS	1	
F15	3518003710	MAGNETRON	2M218HFL 6CF	1	
F16	7272400811	SCREW TAPTITE	TT3 TRS 4X8 MFZN	3	
F17	7S432X4081	SPECIAL SCREW	TT3 TRS 4X8 SE MFZN	1	
F18	3513003200	HOLDER HV CAPACITOR	SECC T0.5	1	
F19	3518302201	CAPACITOR HV	2100VAC 0.98UF #187 75MM	1	
F20	3518400400	DIODE HV	HVR-1X-3AB 12KV #187	1	
F21	3518701100	FUSE HV	5KV 0.55A HV-41A55-02	1	
F22	3518123690	TRANS HV	S1S58A EA30	1	
F23	3516003700	SPECIAL SCREW	TT3 HEX 4X8 FLG MFZN	4	
F24	3510317500	BASE	SBHG T0.5	1	
F25	7S312X40A1	SCREW SPECIAL	T1 TRS 4X10 SE MFZN	5	
F26	3512100900	FOOT	PP DASF-130	2	
F27	7S432X4081	SPECIAL SCREW	TT3 TRS 4X8 SE MFZN	1	
F28	3515201101	STOPPER HINGE *U	SCP-1 T2.5	1	
F29	3512784370	HARNESS MAIN	KOR-6L9R5S	1	
F30	4415A17352	SW MICRO	SZM-V16-FA-63	1	
F31	4415A66600	SW MICRO	SZM-V16-FA-62	2	
F32	3518571000	SWITCH PUSH	V0303A2 / MP101C	1	
F33	3513702620	LEVER LOCK	POM	1	
F34	3513819800	LOCK	PP GP-3152F FH44D	1	
F35	3513601600	LAMP	BL 240V 25W T25 C7A H187	1	
F36	7S312X40A1	SCREW SPECIAL	T1 TRS 4X10 SE MFZN	1	
F37	3966821240	MOTOR SYNCRO	49TYZ-A2 B 5/6R/MIN 4W 220~240VAC 50/60HZ CLASS B	1	
F38	7272400811	SCREW TAPTITE	TT3 TRS 4X8 MFZN	2	
F39	3517400600	COUPLER	XAREC	1	
F40	3511406220	COVER WAVE GUIDE	PP J640A WHITE	1	
F41	3512517300	GUIDE ROLLER	PP 5113MF6 A353B	1	
F42	3514700710	ROLLER	TEFLON	3	
F43	3517202400	TRAY GLASS	GLASS 610 (VE-YONGXIN)	1	



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