

S/M No. :G6C4R5S001

Service Manual

Microwave Oven

Model: KQG-6C4R5S

KQG-6C5R5S

DAEWOO

✓ **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 .

DAEWOO 
ELECTRONICS

Apr. 2005

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.
- (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.

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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 a trained service personnel should make repairs.)

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

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

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

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

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

Do not attempt to defeat them.

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

2. FOR SAFE SERVICE PROCEDURES

1. If the oven is operative prior to servicing, a microwave emission check should be performed prior to servicing the oven.
2. If any certified oven unit is found to 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 CDRH immediately.

IMPORTANT

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

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

As the colours of the wires in the mains 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.

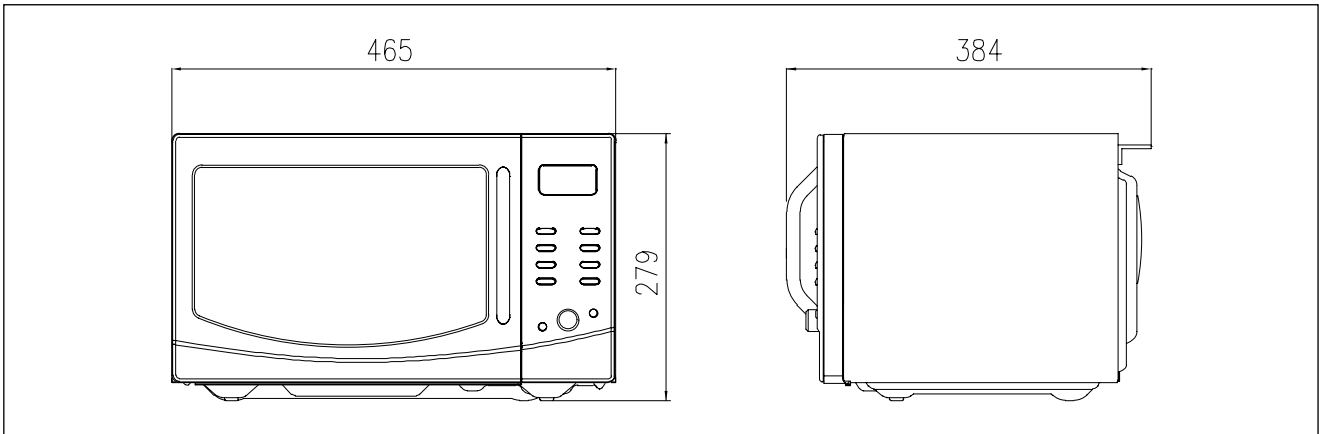
SPECIFICATIONS

MODEL	KQG-6C4R5S / KQG-6C5R5S	
POWER SUPPLY	230V~50Hz, SINGLE PHASE WITH EARTHING	
POWER CONSUMPTION	MICROWAVE	1200 W
	GRILL	1050 W
	COMBINATION	2200 W
MICROWAVE ENERGY OUTPUT	800W	
MICROWAVE FREQUENCY	2450MHz	
OUTSIDE DIMENSIONS (WXHxD)	465X279X384mm	
CAVITY DIMENSIONS (WXHxD)	290X220X306mm	
NET WEIGHT	APPROX. 13.7Kg	
TIMER	60 min. 00 sec.	
POWER SELECTIONS	10 LEVELS	
CAVITY VOLUME	0.7 Cu.Ft.	

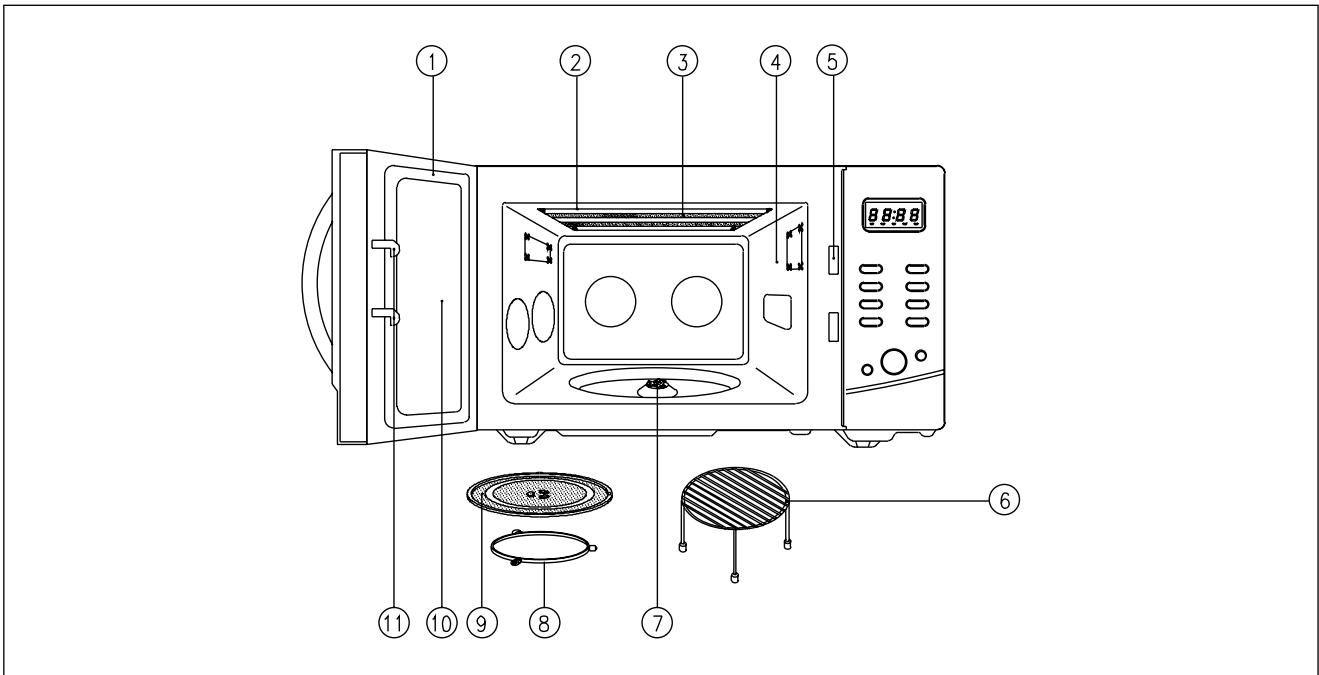
* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

EXTERNAL VIEW (KQG-6C4R5S)

1. OUTER DIMENSION



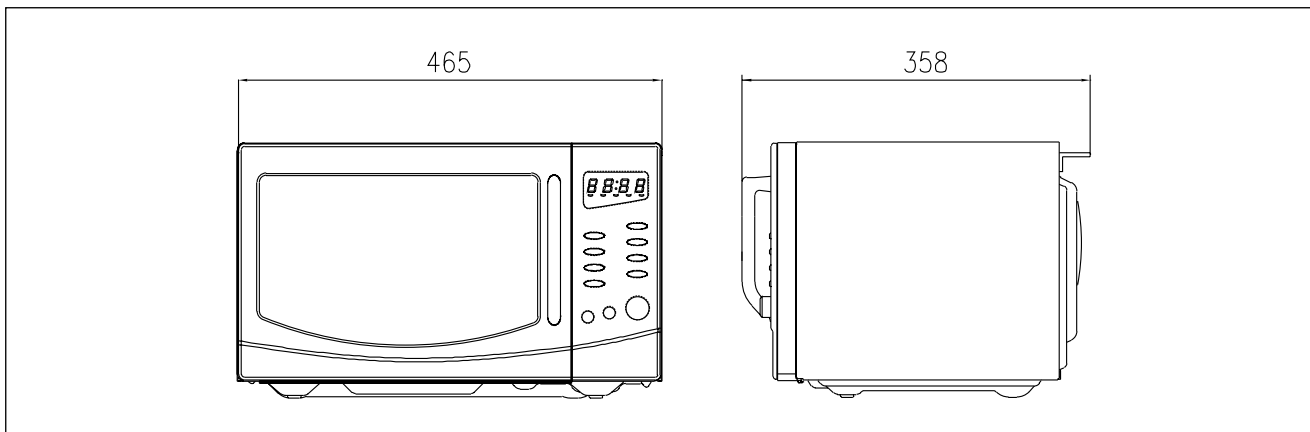
2. FEATURE DIAGRAM



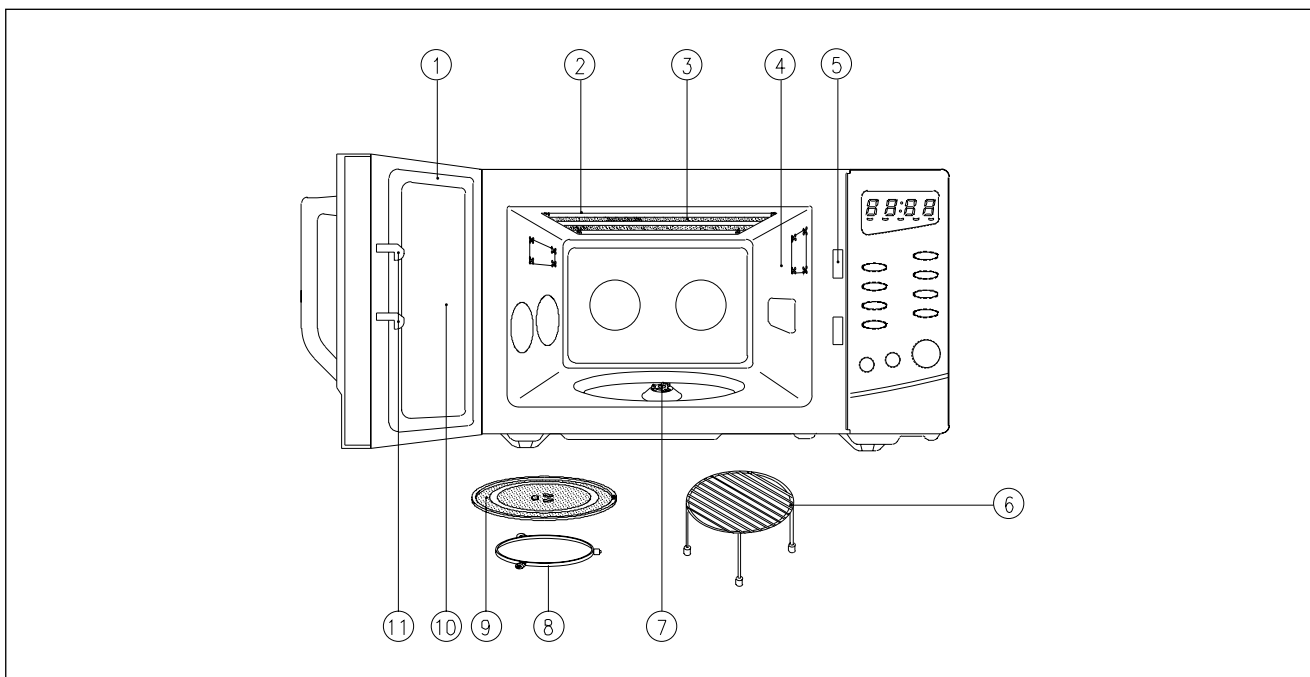
- ① **Door seal** - Door seal maintains the microwave energy within the oven cavity and prevents microwave leakage.
- ② **Cover Heater**
- ③ **Heating Element**
- ④ **Oven cavity**
- ⑤ **Safety interlock system**
- ⑥ **Metal Rack**
- ⑦ **Coupler** - This fits over the shaft in the center of the ovens cavity floor. This is to remain in the oven for all cooking.
- ⑧ **Roller guide** - This must always be used for cooking together with the glass cooking tray.
- ⑨ **Glass cooking tray** - Made of special heat resistant glass. Food in a proper receptacle is placed on this tray for cooking.
- ⑩ **Door viewing screen** - Allows viewing of food. The screen is designed so that light can pass through, but not the microwave.
- ⑪ **Door hook** - When the door is closed, it will automatically shut off. If the door is opened while the oven is operating, the magnetron will immediately stop operating.

EXTERNAL VIEW (KQG-6C5R5S)

1. OUTER DIMENSION

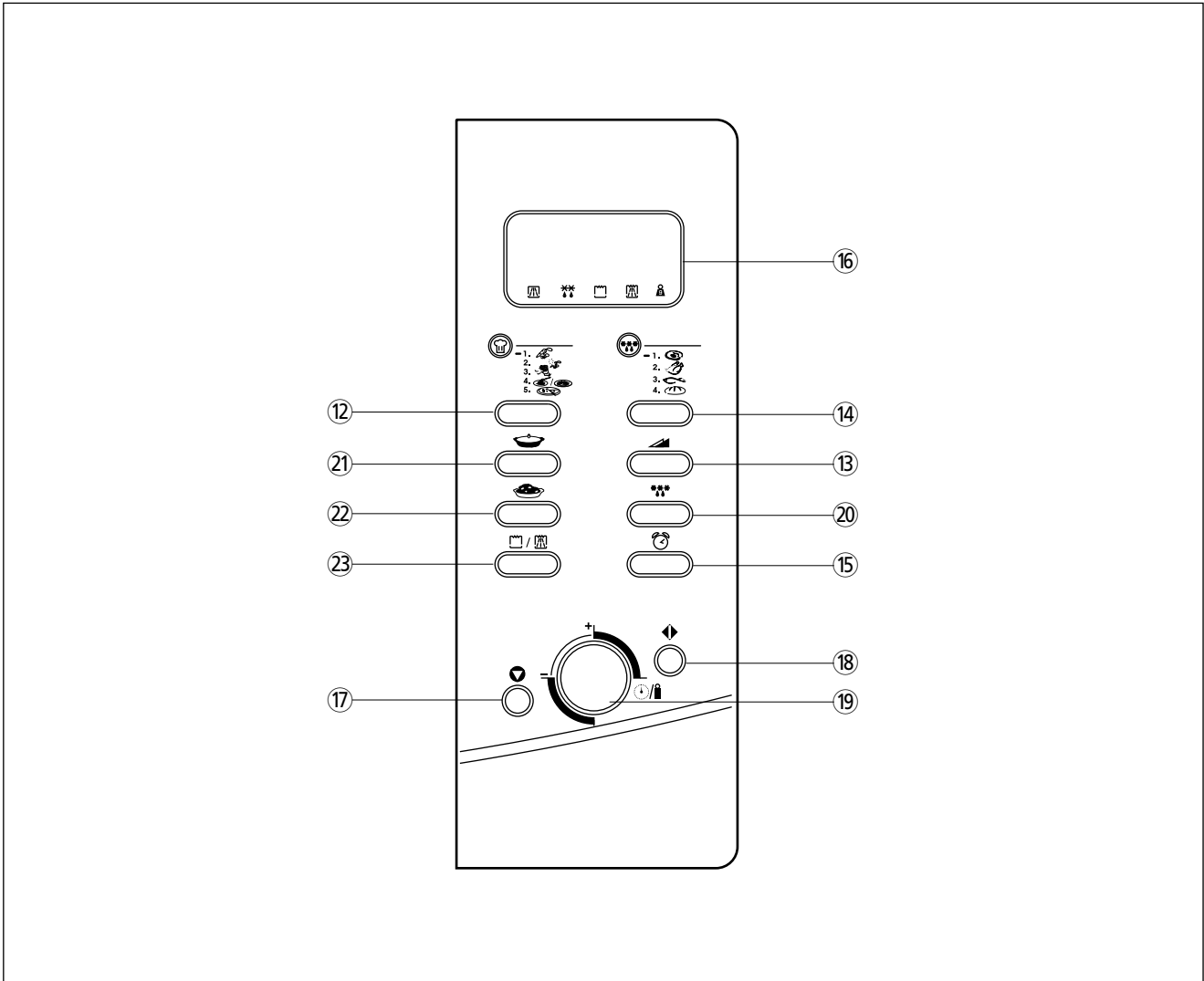


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3. CONTROL PANEL (KQG-6C4R5S)



⑫ **Auto cook** - Used to cook using a program or to reheat.

⑬ **Micro Power** - Used to set power level.

⑭ **Auto Defrost** - Used to defrost foods by weight.

⑮ **Clock** - Used to set clock.

⑯ **Display** - Cooking time, power level, indicators and present time are displayed.

⑰ **Stop/Clear** - Used to stop the oven operation or to erase all entries.

⑱ **Start/Express cook** - Used to start the oven operation and also increase the reheat time by 30 seconds.

⑲ **Dial knob** - Used to set the time and weight.

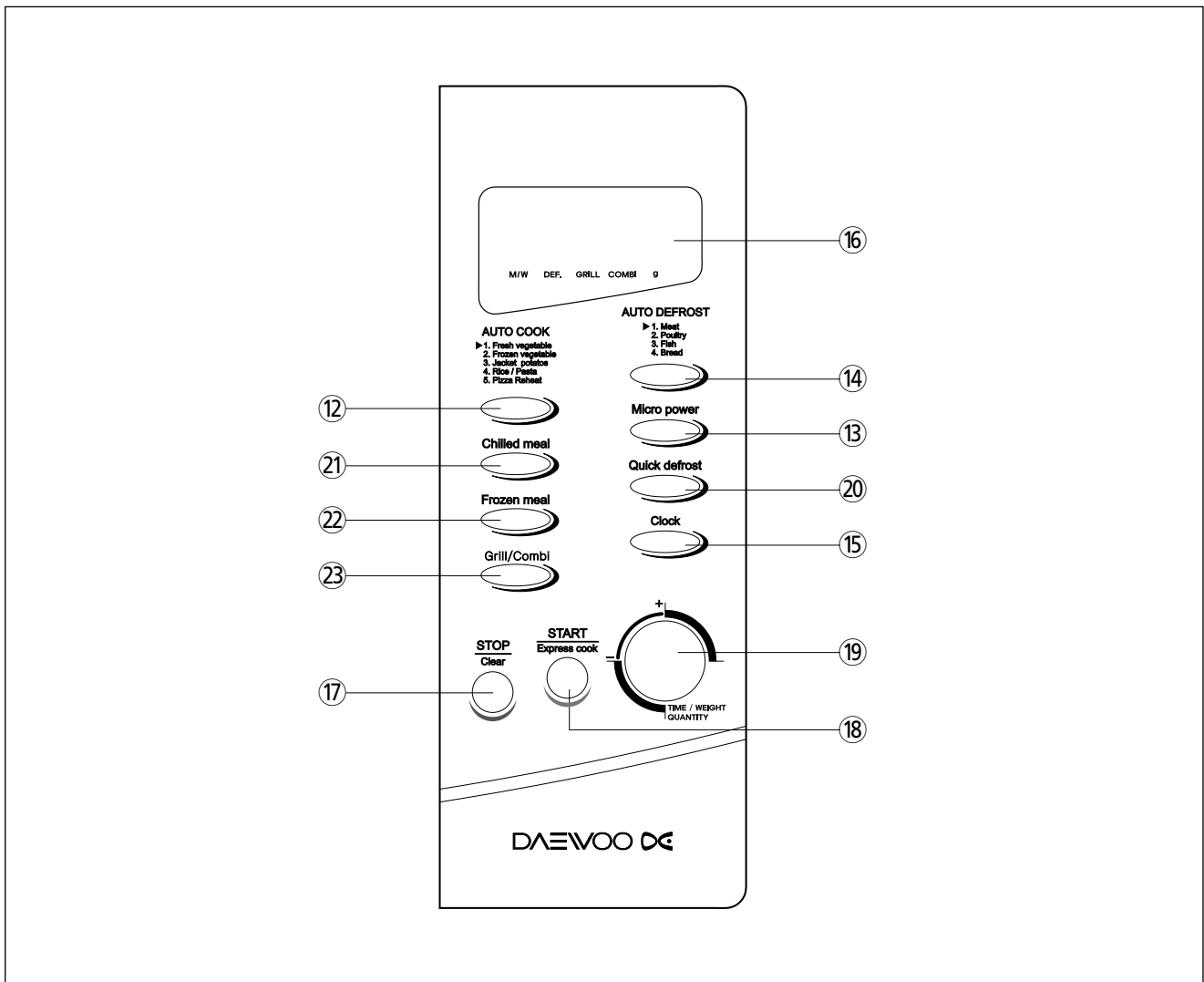
⑳ **Quick Defrost** - Used to defrost food very Quickly.

㉑ **Chilled Meal** - Used to reheat the meal.

㉒ **Frozen Meal** - Used to reheat the meal.

㉓ **Grill/Combi** -Used to cook grill/combi.

(KQG-6C5R5S)



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INSTALLATION

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 oven 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.

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 10 amperes, 230Volts, 50Hz grounded outlet.

➤ 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 samaged, 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 are 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 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 wire with a earthing plug. The plug must be plugged into an outlet that is properly installed ant earthed.

WARNING

Improper use of the earthing plug can result in a risk of electric shock. Consult a qualified electrician or serviceman 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 acct 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.

OPERATIONS AND FUNCTIONS

This section includes useful information about oven operation.

- 1 Plug power supply cord into 230V AC 50Hz power outlet.
- 2 After placing the food in a suitable container, open the oven door and put it on the glass tray.
The glass tray and roller guide must always be in place during cooking.
- 3 Close the door. Make sure that it is firmly closed.
- 4 The oven 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.
- 5 The oven automatically cooks on full power unless set to a lower power level.
- 6 The display will show “ : 0” when the oven is plugged in.
- 7 Time clock returns to the present time when the cooking time ends.
- 8 When the STOP/CLEAR is pressed during the oven operation, the oven stops cooking and all information retained. To erase all information(except the present time), press the STOP/CLEAR once more. If the oven door is opened during the oven operation, all information is retained.
- 9 The oven will not start cooking until the door is completely closed or the program has been reset.

NOTE : When using the GRILL or COMBI mode;

- Do not open the door so often, the temperature inside the oven decrease and the cooking may not be completed in setting time.
- Never touch the oven window and metal interior of the oven when taking food in and out, because the temperature inside the oven and door is very high.
- When using these modes, be careful as the tray will be hot to touch, use oven gloves or pot holders while handling tray.

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

WATTAGE OUTPUT CHART

- The power-level is set by pressing the 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-90	90%
3 times	P-80	80%
4 times	P-70	70%
5 times	P-60	60%
6 times	P-50	50%
7 times	P-40	40%
8 times	P-30	30%
9 times	P-20	20%
10 times	P-10	10%
11 times	P-00	0%

DISASSEMBLY AND ASSEMBLY

Cautions to be observed when trouble shooting.

Unlike many other appliances, the microwave oven is high-voltage, high-current equipment.

It is completely safety during normal operation.

However, carelessness in servicing the oven can result in an electric shock or possible danger from a short circuit.

You are asked to observe the following precautions carefully.

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

(1) Check the grounding.

Do not operate on a 2-wire extension cord.

The microwave oven is designed to be used with grounded.

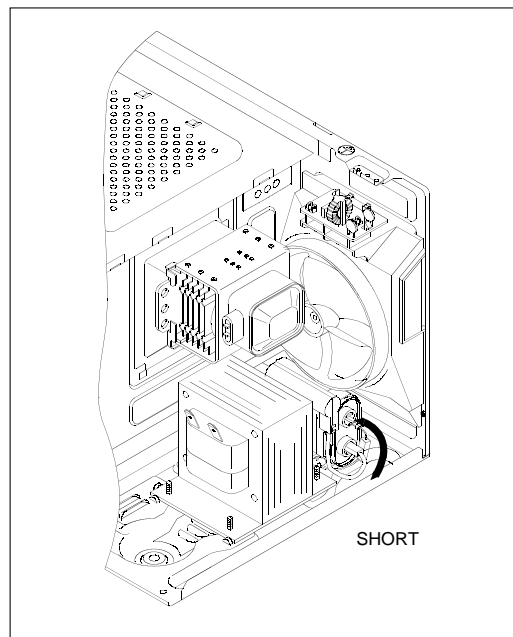
It is imperative, therefore, to make sure it is grounded properly before beginning repair work.

(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 15A 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.

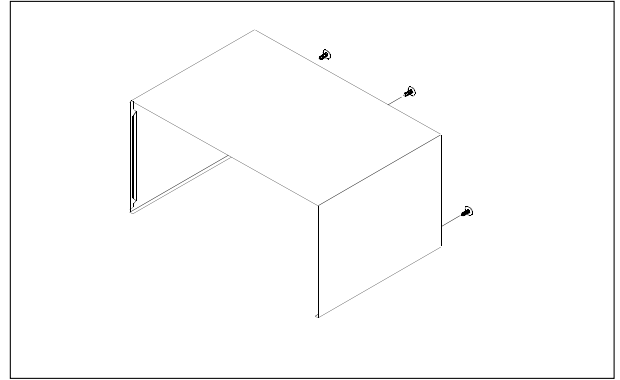


CAUTION : Service personnel should remove their watches whenever working close to or replacing the magnetron.

CAUTION : 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.

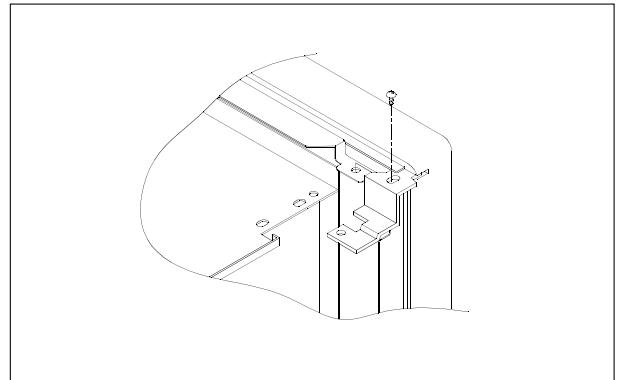
1. To remove cabinet

- 1) Remove three screws on cabinet back.
- 2) Push the cabinet backward.



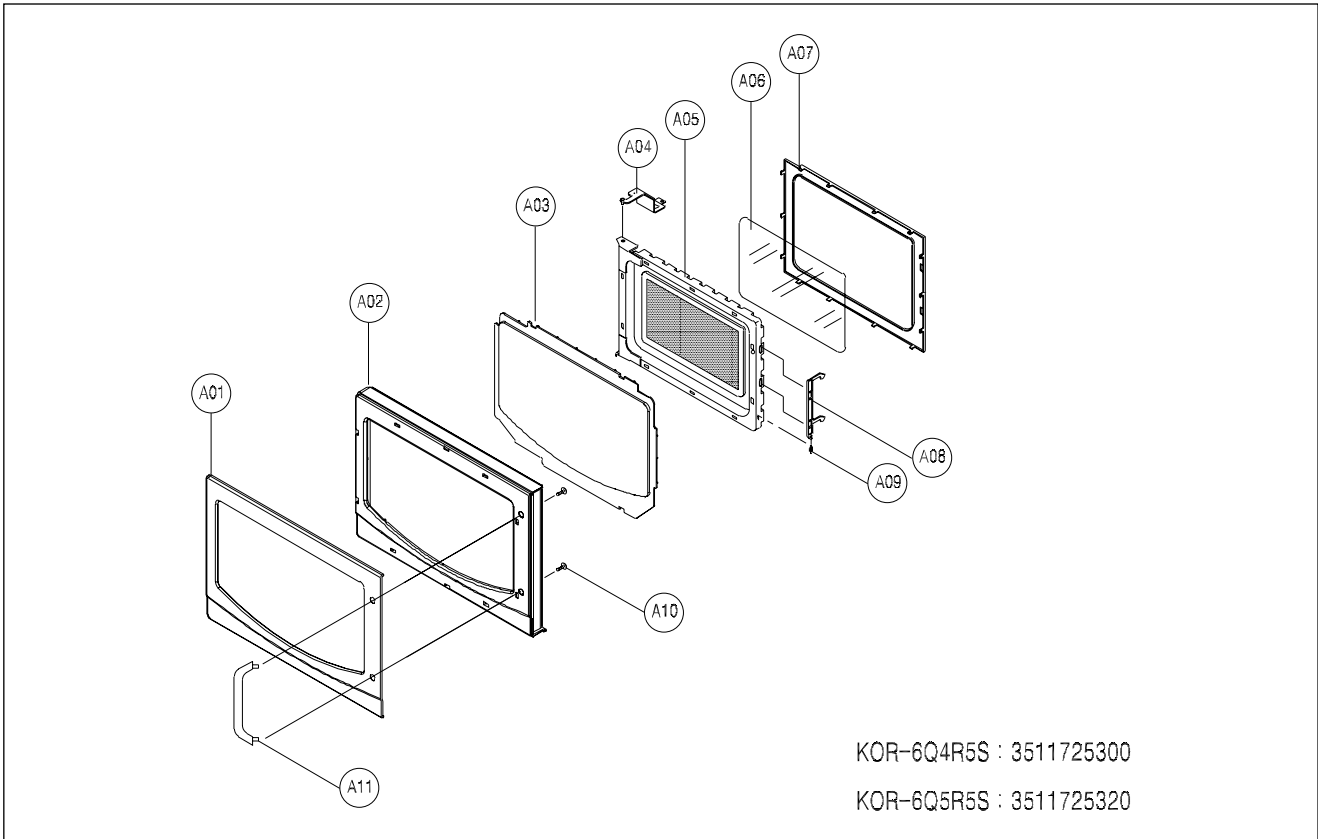
2. To remove door assembly

- 1) Remove a 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	3511614900	DECORATOR DOOR AS	KOR-6Q4R5S	1	
A02	3512209000	FRAME DOOR	ABS SG-0760D SG-175	1	
A03	3517009100	BARRIER-SCREEN *O	SAN CR-5381 SMOG	1	
A04	3515204100	STOPPER HINGE *T AS	KOR-63150S	1	
A05	3511719500	DOOR PAINTING AS	KOR-6C0B5S	1	
A06	3517002800	BARRIER-SCREEN *I	POLYESTER T0.1	1	
A07	3512300210	GASKET DOOR	PP	1	
A08	3513100730	HOOK	POM BLACK	1	
A09	3515101320	SPRING HOOK	HSW-3	1	
A10	3513100730	SCREW TAPPING	T2S TRS 4X12 MFZN	2	
A11	3512605610	HANDLE DOOR	ABS SG-0760D SG-175	1	KOR-6Q4R5S
	3512605640			1	KOR-6Q5R5S

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

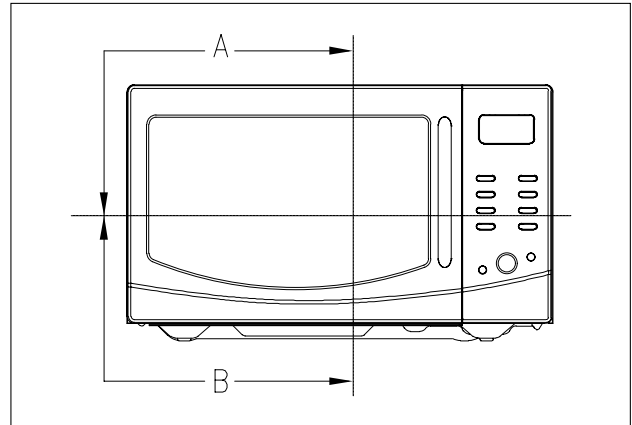
4. Method to reduce the gap between the door seal and the oven front surface.

(1) To reduce gap located on part 'A'

- Loosen two screws on stopper hinge top, and then push the door to contact the door seal to oven front surface.
- Tighten two screws.

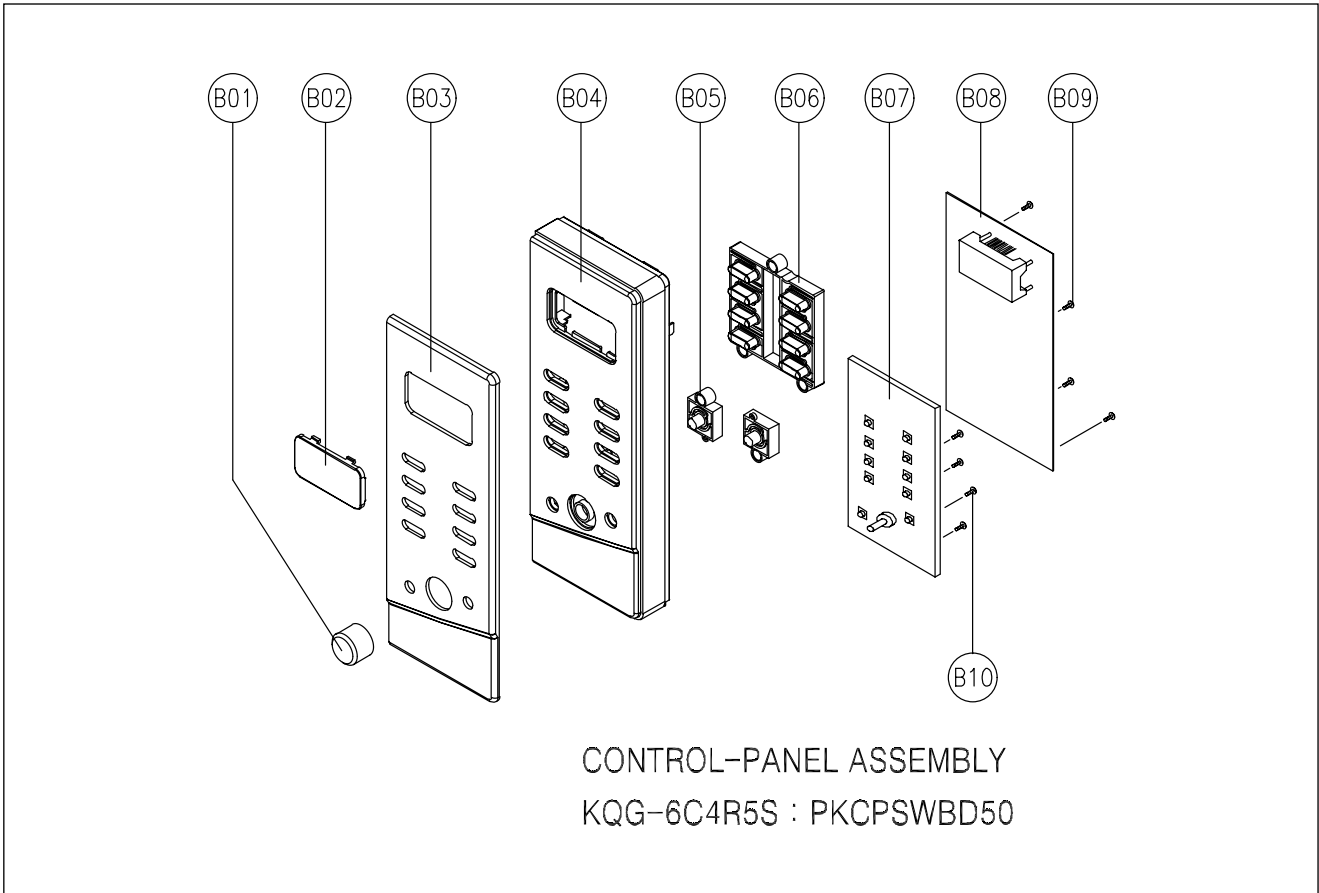
(2) To reduce gap located on part 'B'.

- Loosen three screws on bottom hinge, and then the door to contact the door seal to oven front surface.
- Tighten three screws.



NOTE: A small gap may be acceptable if the microwave leakage does not exceed 4m W/cm^2 .

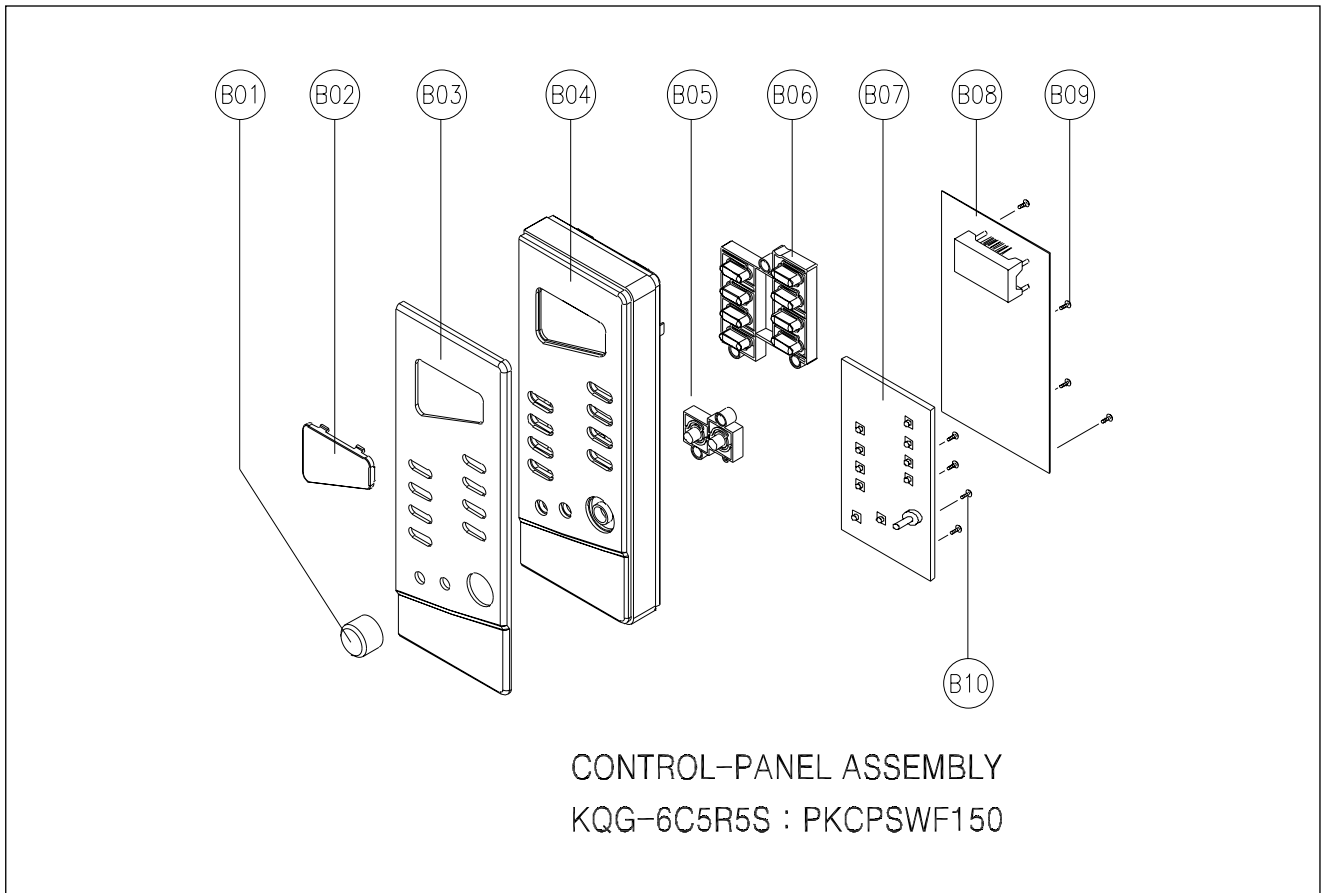
5. To remove control panel parts. (KQG-6C4R5S)



REF NO.	PART CODE	PART NAME	DESCRIPTION	Q'TY	REMARK
B01	3513408400	KNOB VOLUME	ABS SG-175 SG-0760D	1	
B02	3515501550	WINDOW DISPLAY	SAN CR-5381 SMOG	1	
B03	3511614200	DECORATOR C-PANEL	STS430 T0.5 H/L	1	
B04	3516732300	CONTROL-PANEL	ABS SG-175 SG-0760D	1	
B05	3516913500	BUTTON FUNCTION-B	ABS SG-175 SG-0760D	2	
B06	3516913400	BUTTON FUNCTION-A	ABS SG-175 SG-0760D	1	
B07	PKBPMSBD00	PCB BUTTON MANUAL AS	KOR-6Q4R5S	1	
B08	PKMPMSBD50	PCB MAIN MANUAL AS	KQG-6C4R5S	1	
B09	7122401211	SCREW TAPPING	T2S TRS 4X12 MFZN	4	
B10	7621301011	SCREW TAPPING	T2 PAN 3X10 PW MFZN	4	

- 1) Remove the screw which secure the control panel, push up two snap fits and draw forward the control panel assembly.
- 2) Remove screws which secure the PCB assembly to control panel.
- 3) Disconnect membrane tail from the connector of the PCB assembly.
- 4) Detach the function buttons and knob from the control panel.
- 5) Reverse the above steps for reassembly.

(KQG-6C5R5S)

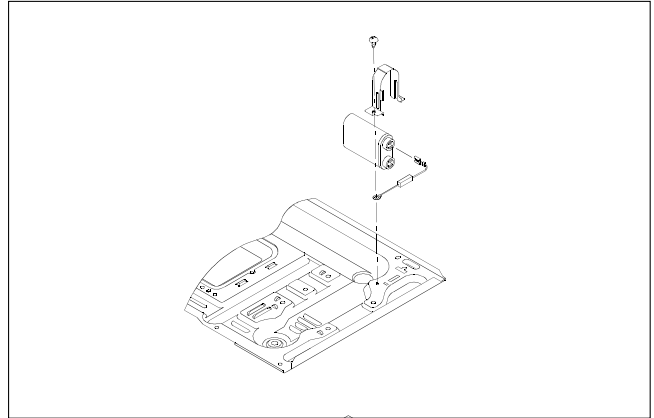


REF NO.	PART CODE	PART NAME	DESCRIPTION	Q'TY	REMARK
B01	3513408420	KNOB VOLUME	ABS SG-175 SG-0760D	1	
B02	3515502400	WINDOW DISPLAY	SAN CR-5381 SMOG	1	
B03	3511614200	DECORATOR C-PANEL	STS430 T0.5 H/L	1	
B04	3516732350	CONTROL-PANEL	ABS SG-175 SG-0760D	1	
B05	3516913520	BUTTON FUNCTION-B	ABS SG-175 SG-0760D	2	
B06	3516913420	BUTTON FUNCTION-A	ABS SG-175 SG-0760D	1	
B07	PKBPMSF100	PCB BUTTON MANUAL AS	KOR-6Q4R5S	1	
B08	PKMPMSF150	PCB MAIN MANUAL AS	KQG-6C4R5S	1	
B09	7122401211	SCREW TAPPING	T2S TRS 4X12 MFZN	4	
B10	7621301011	SCREW TAPPING	T2 PAN 3X10 PW MFZN	4	

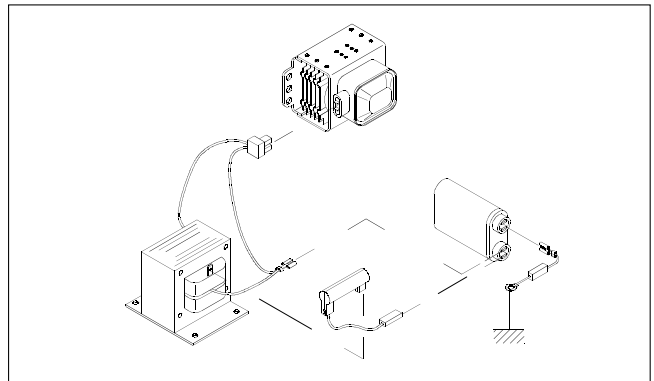
- 1) Remove the screw which secure the control panel, push up two snap fits and draw forward the control panel assembly.
- 2) Remove screws which secure the PCB assembly to control panel.
- 3) Disconnect membrane tail from the connector of the PCB assembly.
- 4) Detach the function buttons and knob from the control panel.
- 5) Reverse the above steps for reassembly.

6. To remove high voltage capacitor.

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

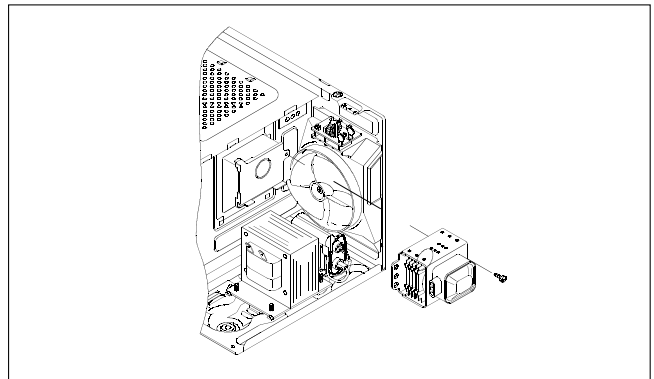


◆ High voltage circuit wiring

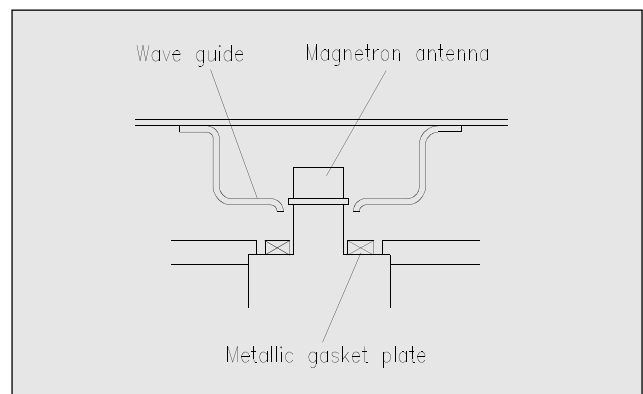
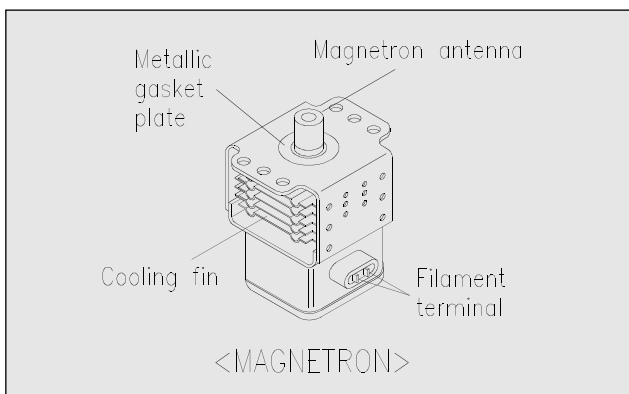


7. To remove magnetron.

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

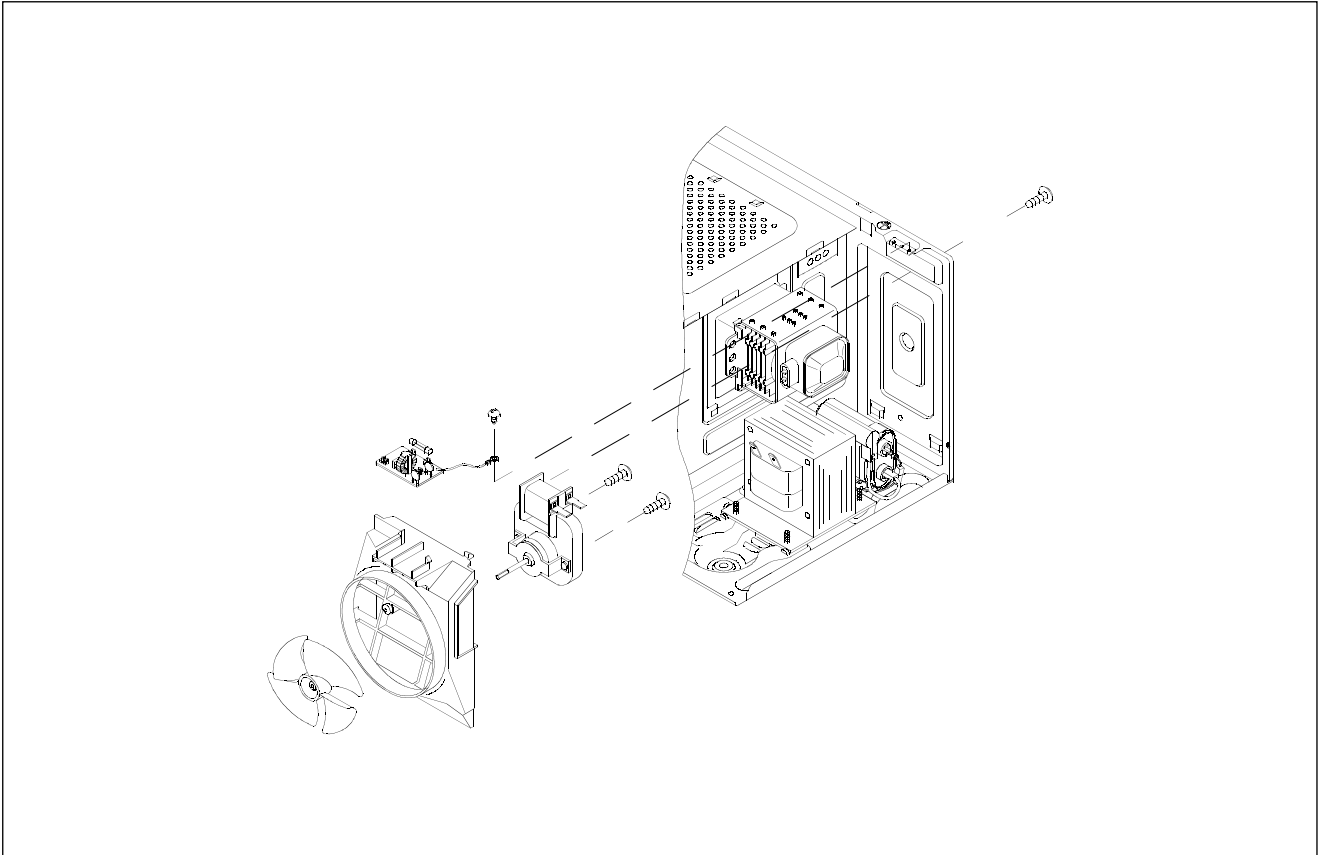


NOTE : Never install the magnetron without the metallic gasket plate which is packed with each magnetron to prevent microwave leakage. Whenever repair work is carried out on magnetron, check the microwave leakage. It shall not exceed $4\text{mW}/\text{cm}^2$ for a fully assembled oven with door normally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



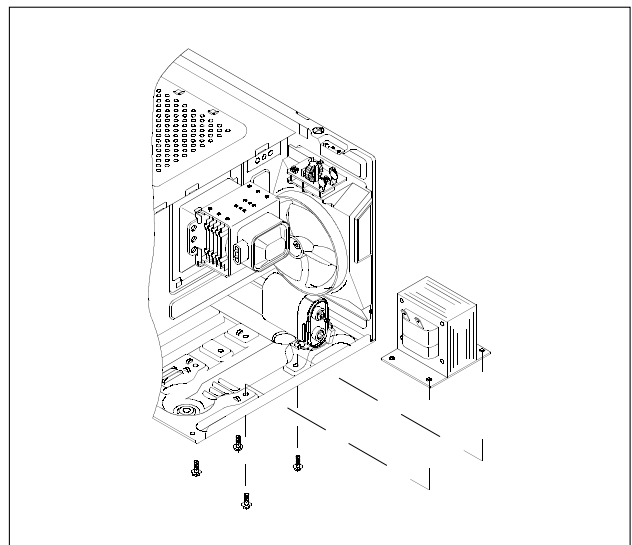
8. To remove wind guide assembly.

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



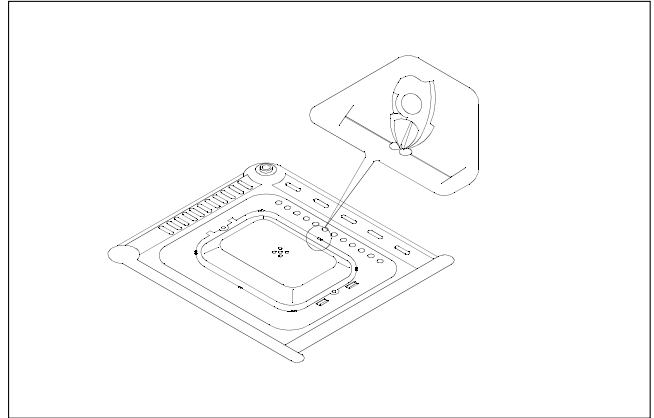
9. To remove H.V.transformer.

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

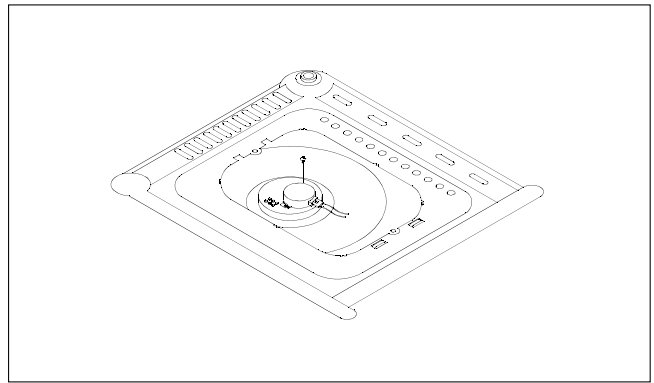


10. To remove tray motor

- 1) Remove the coupler in the cavity.
- 2) Turn the set upside down.
- 3) Cut the tray motor cover part from the base plate.
- 4) Remove the tray motor cover.

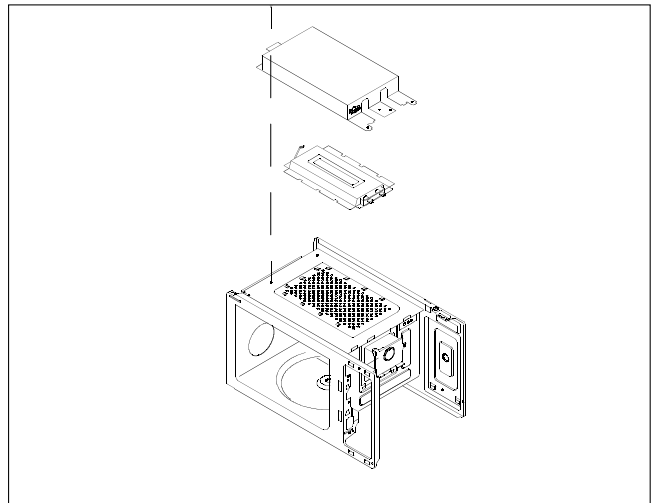


- 5) Remove a screw which secure the tray motor.
- 6) Remove the tray motor.
- 7) Reverse the above steps for reassembly except for securing the tray motor cover with screw.



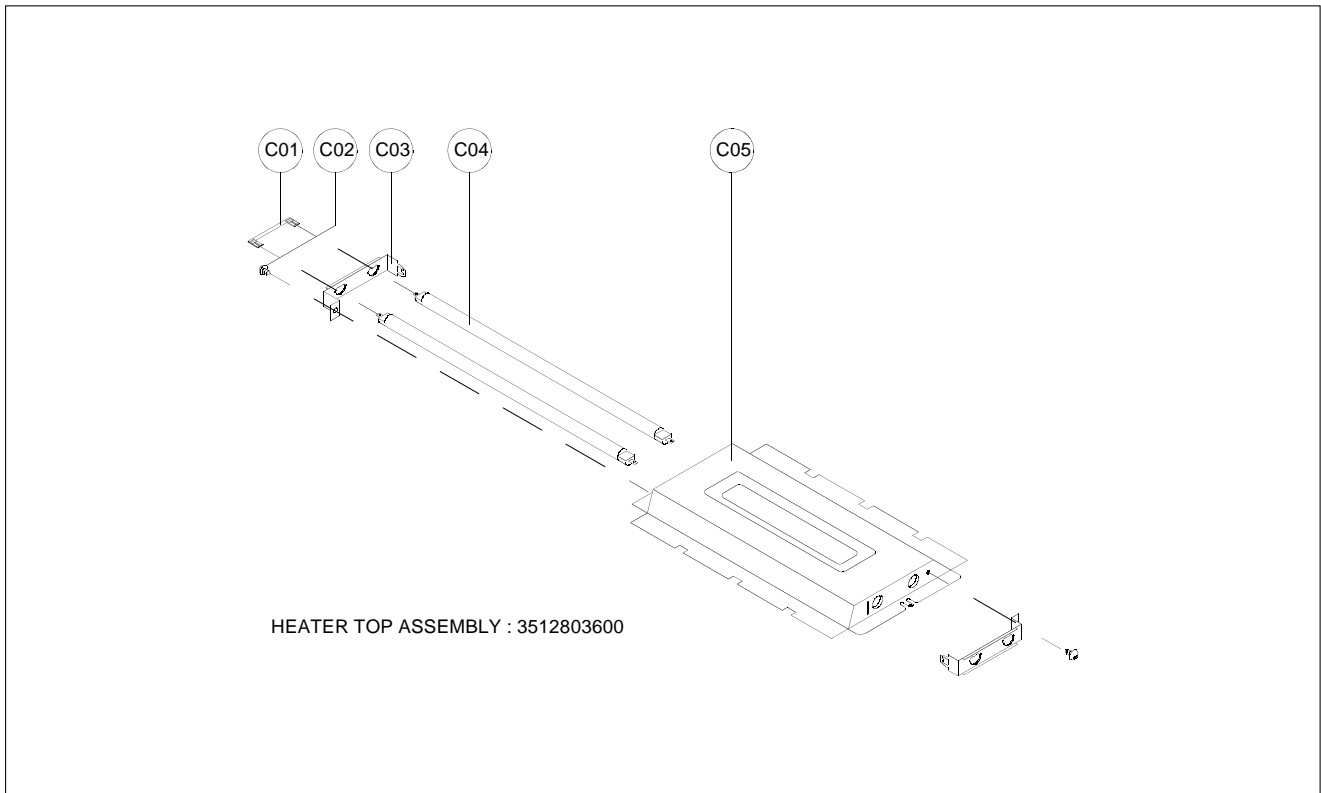
11. To remove heater assembly

- 1) Remove one side of the heater harness.
- 2) Remove a screw which secure the cover insulator top.
- 3) Remove the cover insulator top.
- 4) Remove the heater top assembly.
- 5) Reverse the above steps for reassembly.



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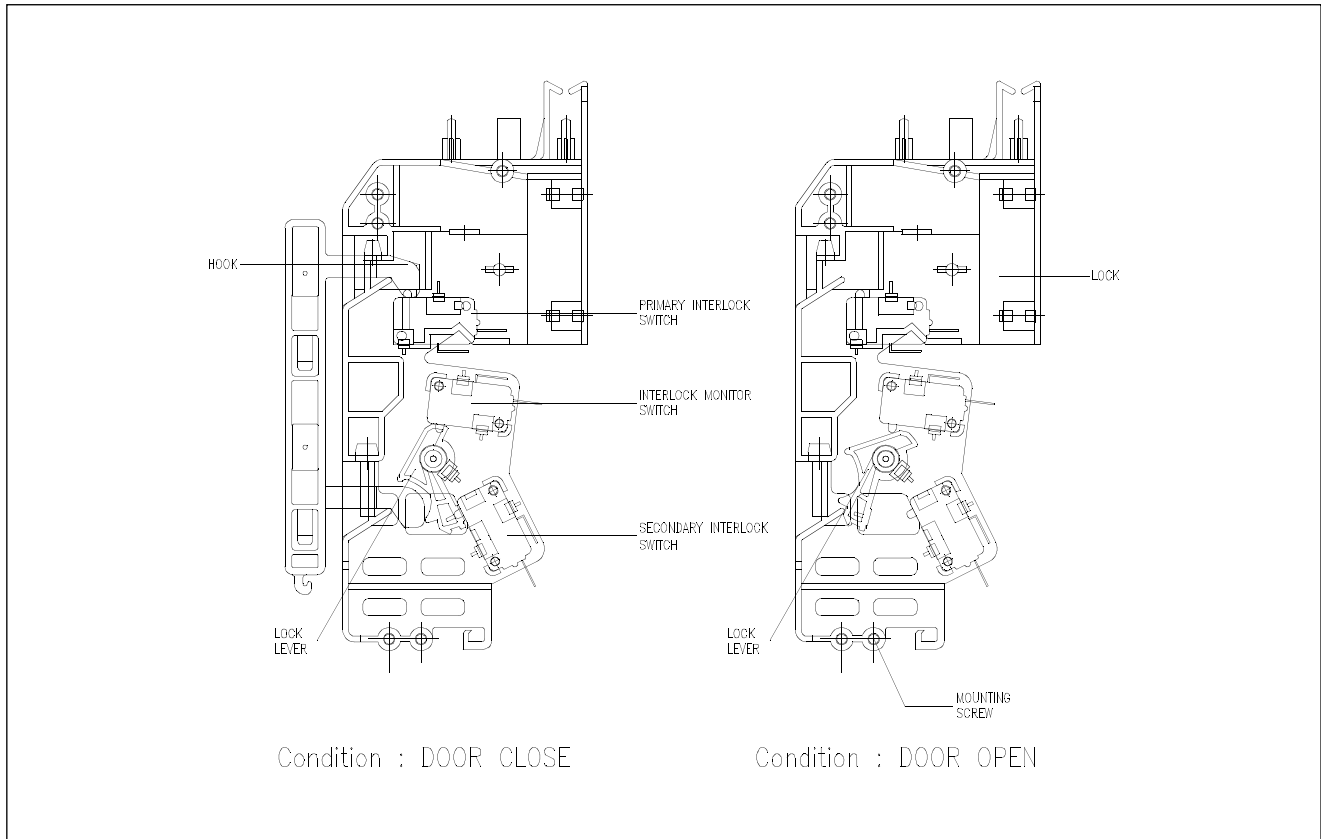
12. To remove heater parts



REF NO.	PART CODE	PART NAME	DESCRIPTION	Q'TY	REMARK
C01	3512765100	HARNESS HEATER	KOC-970T1S TEFLON	1	
C02	7112401011	SCREW TAPPING	T1 TRS 4X10 MFZN	2	
C03	3510607800	BRACKET HEATER *T	SBHG T0.5	2	
C04	3512803700	HEATER MIRACLON	115V AC 500W	2	
C05	3511408100	COVER HEATER *T	STS430 T0.5	1	

INTERLOCK MECHANISM AND ADJUSTMENT

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



(1) Primary interlock switch

When the door is closed, the hook locks the oven door. If the door is not closed properly, the oven will not operate.

When the door is closed, the hook pushes the button of the microswitch. Then the button of the primary interlock switch bring it under ON condition.

(2) Secondary interlock switch and interlock monitor switch

When the door is closed, the hook pushes the lock lever downward. The lock lever presses the button of the interlock monitor switch to bring it under NO 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 changed (NO condition) before other switches are closed.

When the door is opened, the interlock monitor switch should be changed (NC condition) after other switches are opened.

(3) Adjustment steps

- Loosen the one mounting screw.
- Adjust interlock switch assembly position.
- Make sure that lock lever moves smoothly after adjustment is completed.
- Tighten completely two mounting screws.

NOTE :

Microwave emission test should be performed after adjusting interlock mechanism.

If the microwave emission exceed $4\text{mW}/\text{cm}^2$, readjust interlock mechanism.

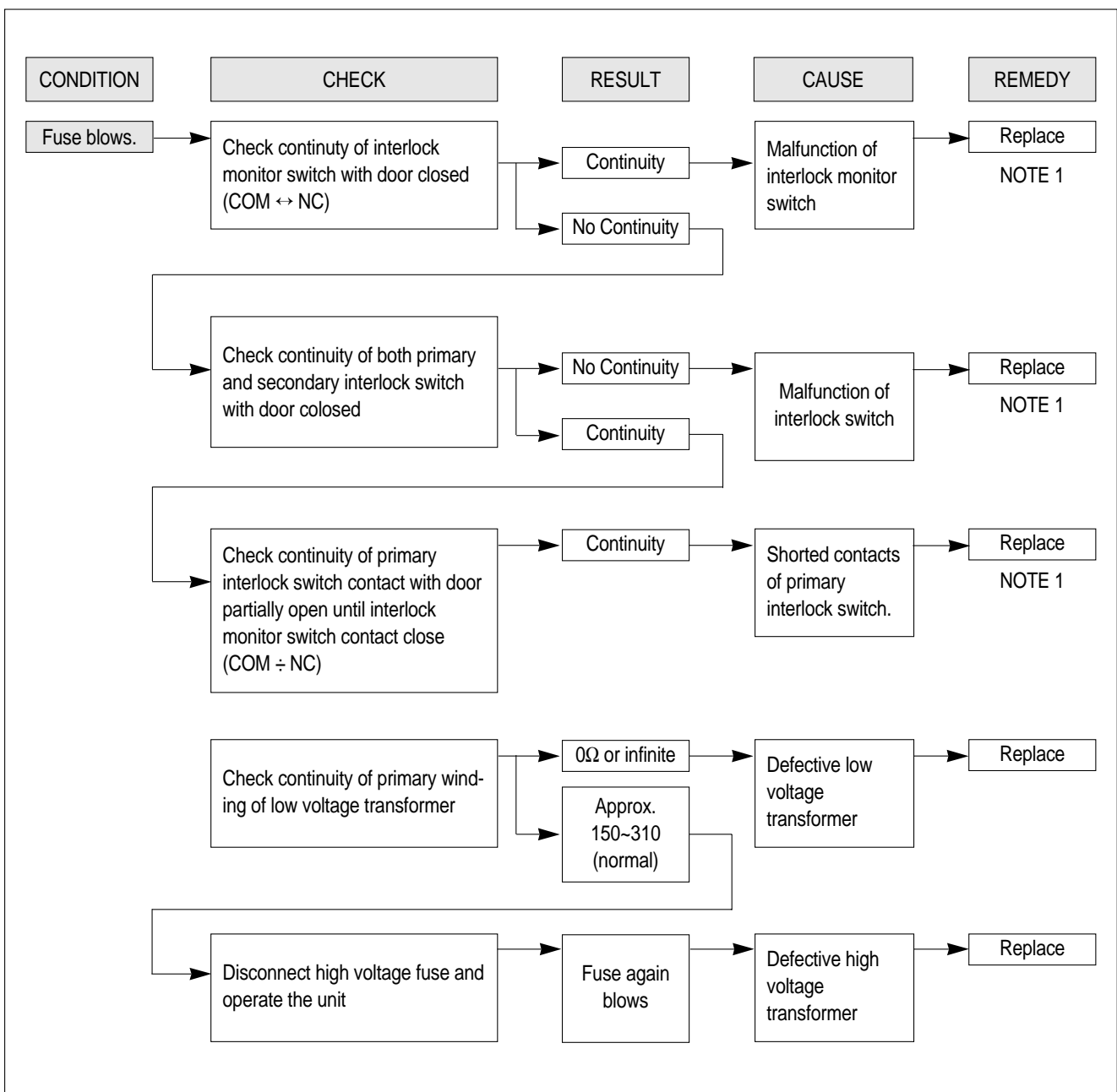
TROUBLESHOOTING GUIDE

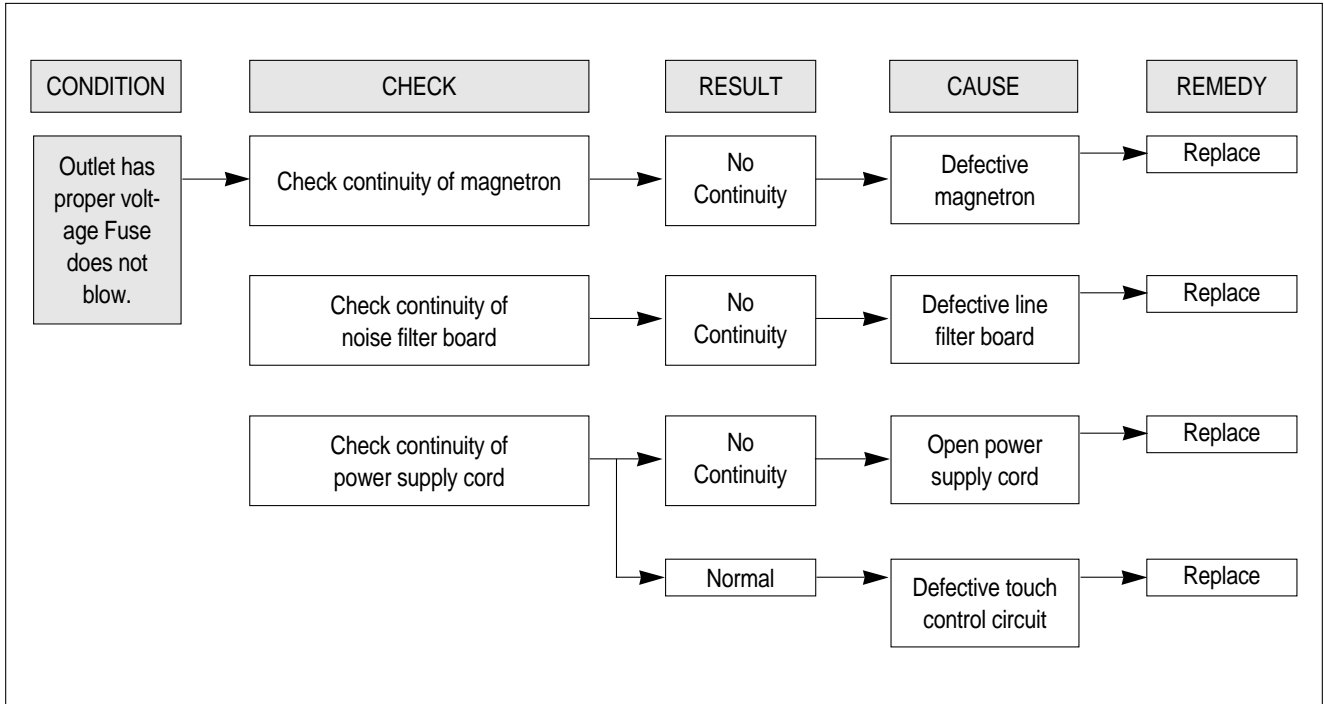
Following the procedure below to check if the oven is defective or not.

- 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.

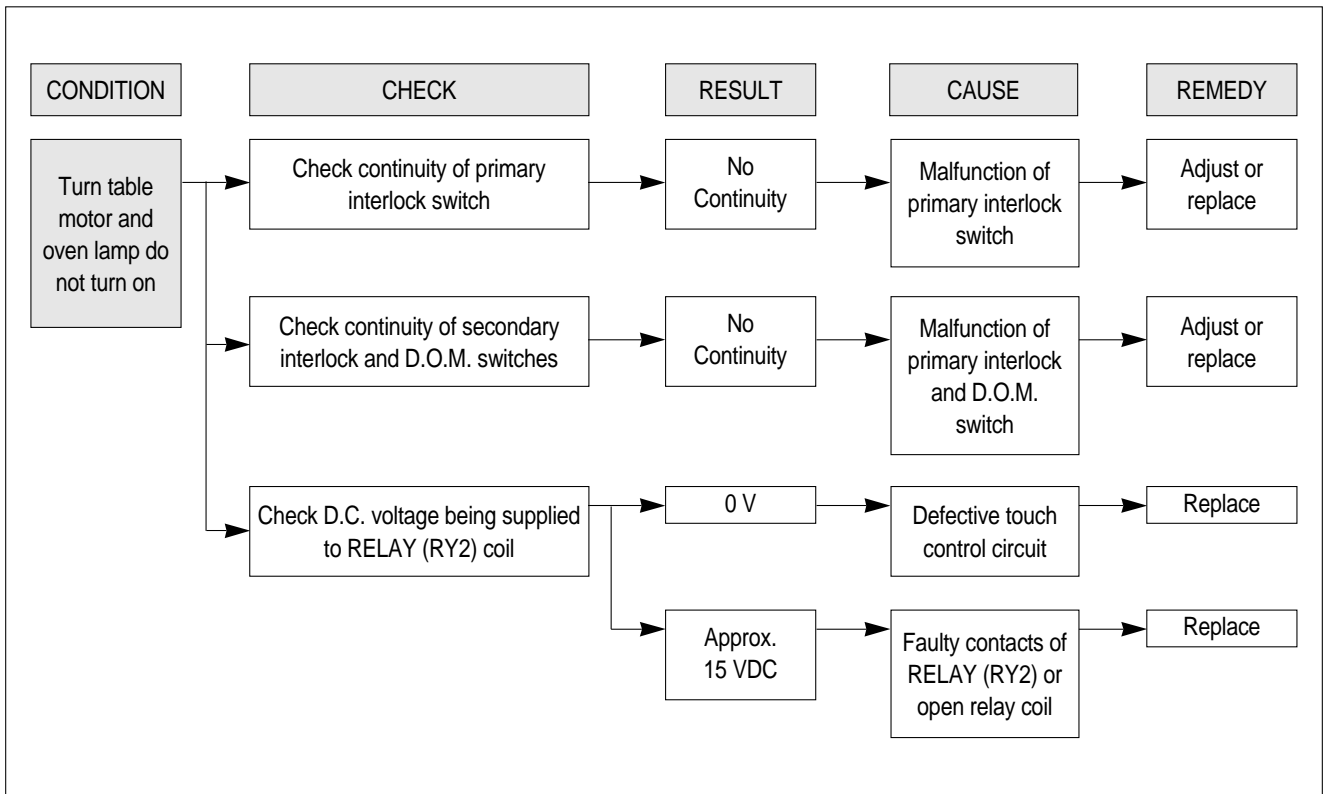
(TROUBLE 1) Oven does not operate at all : any inputs can not be accepted.



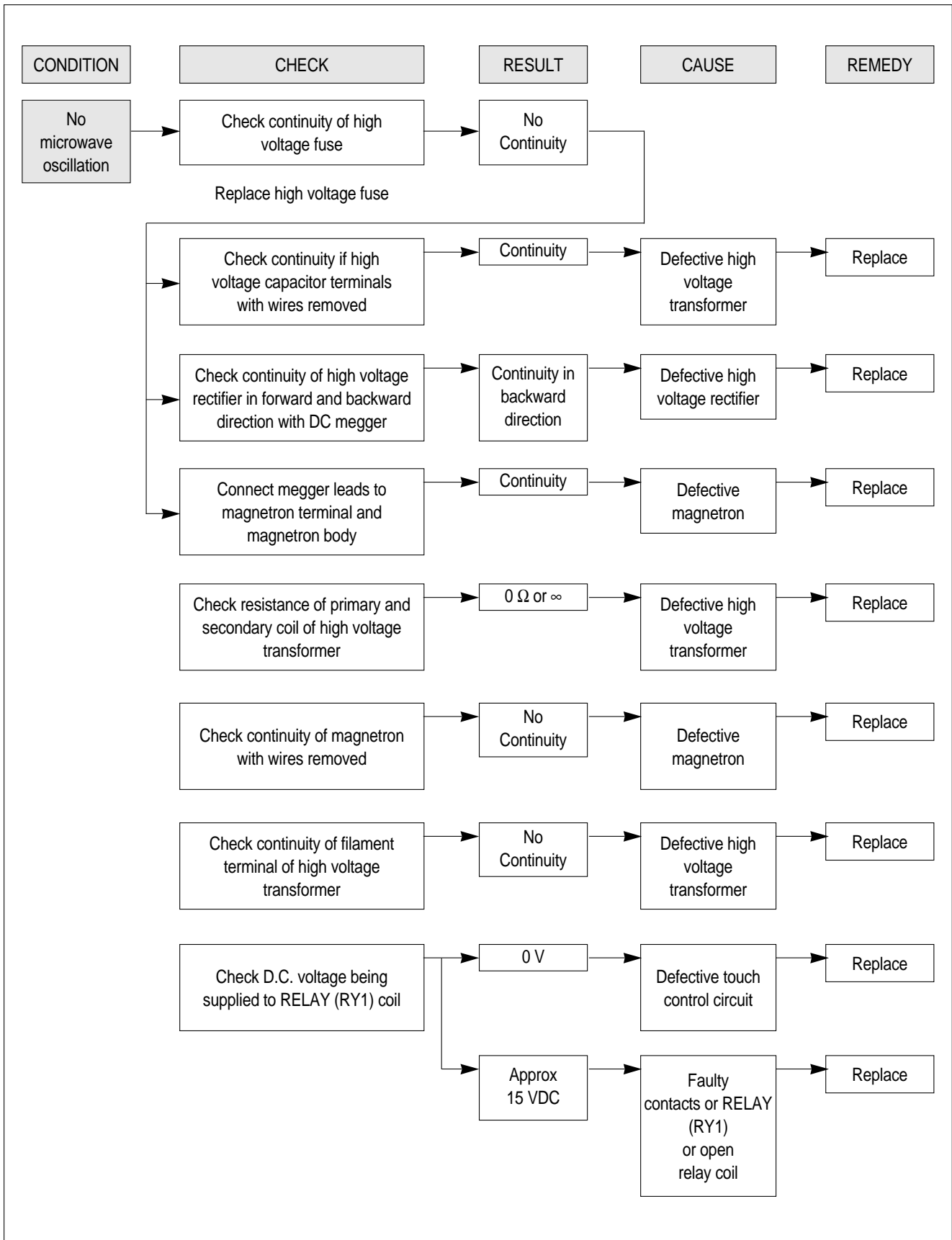


NOTE
 All these switches must be replaced at the same time, please refer to "Interlock Mechanism And Adjustment".

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

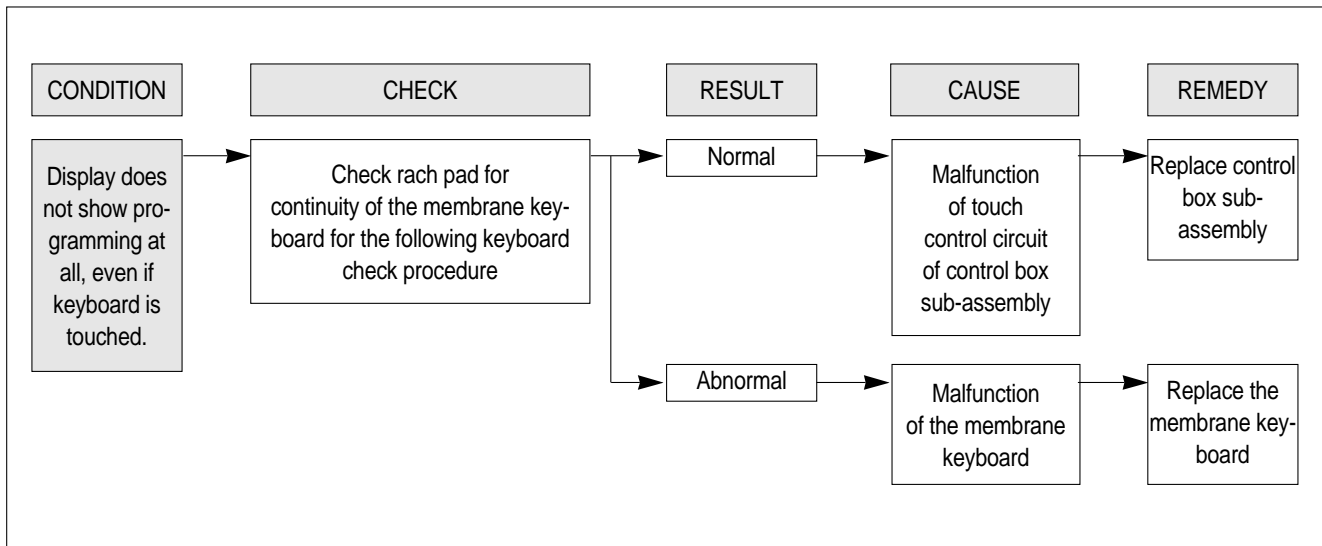
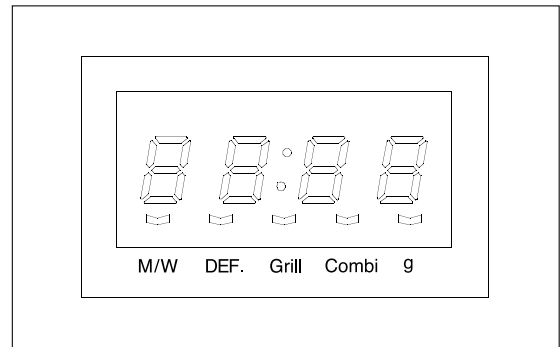


(TROUBLE 3) No microwave oscillation even though fan motor rotates.



(TROUBLE 4) The following visual conditions indicate a probable defective touch control circuit or membrane switch assembly

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



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

MEASUREMENT AND TEST

1. MEASUREMENT OF THE MICROWAVE POWER OUTPUT

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

PROCEDURE

- 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 ± 5 cc of potable water.
- 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.
- 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.

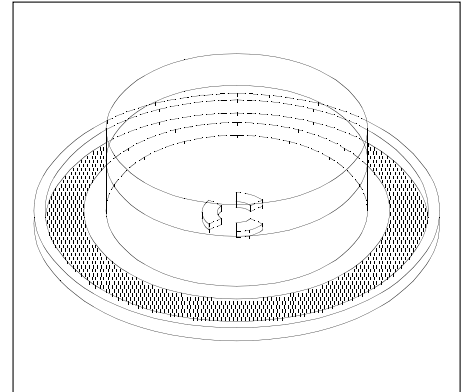
After addition of the water to the vessel, the load is immediately placed on the center of the shelf, which is in the lowest normal position.

- Microwave power is switched on.
- 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.
- The initial and final temperature of water is selected so that the maximum difference between the ambient and final water temperature is 5K.
- The microwave power output P in watts is calculated from the following formula :

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

- ΔT 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 :

- Water load should be measured exactly to 1 liters.
- Input power voltage should be exactly specified voltage (Refer to SPECIFICATIONS)
- 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

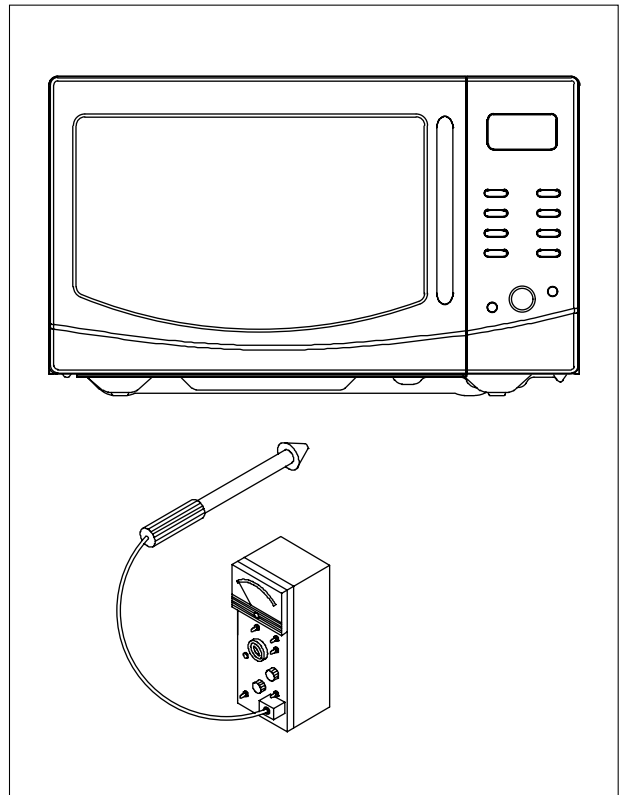
2. MICROWAVE RADIATION TEST

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.

PROCEDURES

1. Prepare Microwave Energy Survey Meter, 600cc glass beaker, and glass thermometer 100°C (212°F).
2. Pour $275\text{cc} \pm 15\text{cc}$ of tap water initially at $20 \pm 5^{\circ}\text{C}$ ($68 \pm 9^{\circ}\text{F}$) in the 600cc glass beaker with an inside diameter of approx. 95mm (3.5in.).
3. Place it at the center of the tray and set it in a cavity.
4. Close the door and operate the oven.
5. Measure the leakage by using Microwave Energy Survey Meter with dual ranges, set to 2450MHz.
 - 1) Measured radiation leakage must not exceed the value prescribed below. Leakage for a fully assembled oven with door normally closed must be less than $4\text{mW}/\text{cm}^2$.
 - 2) When measuring the leakage, always use the 5cm (2in.) space cone with probe. Hold the probe perpendicular to the cabinet and door. Place the space cone of the probe on the door, cabinet, door 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.



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 windingApprox. $110\Omega \pm 10\%$
 - Filament windingApprox. 0Ω
 - Primary windingApprox. 1Ω

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.

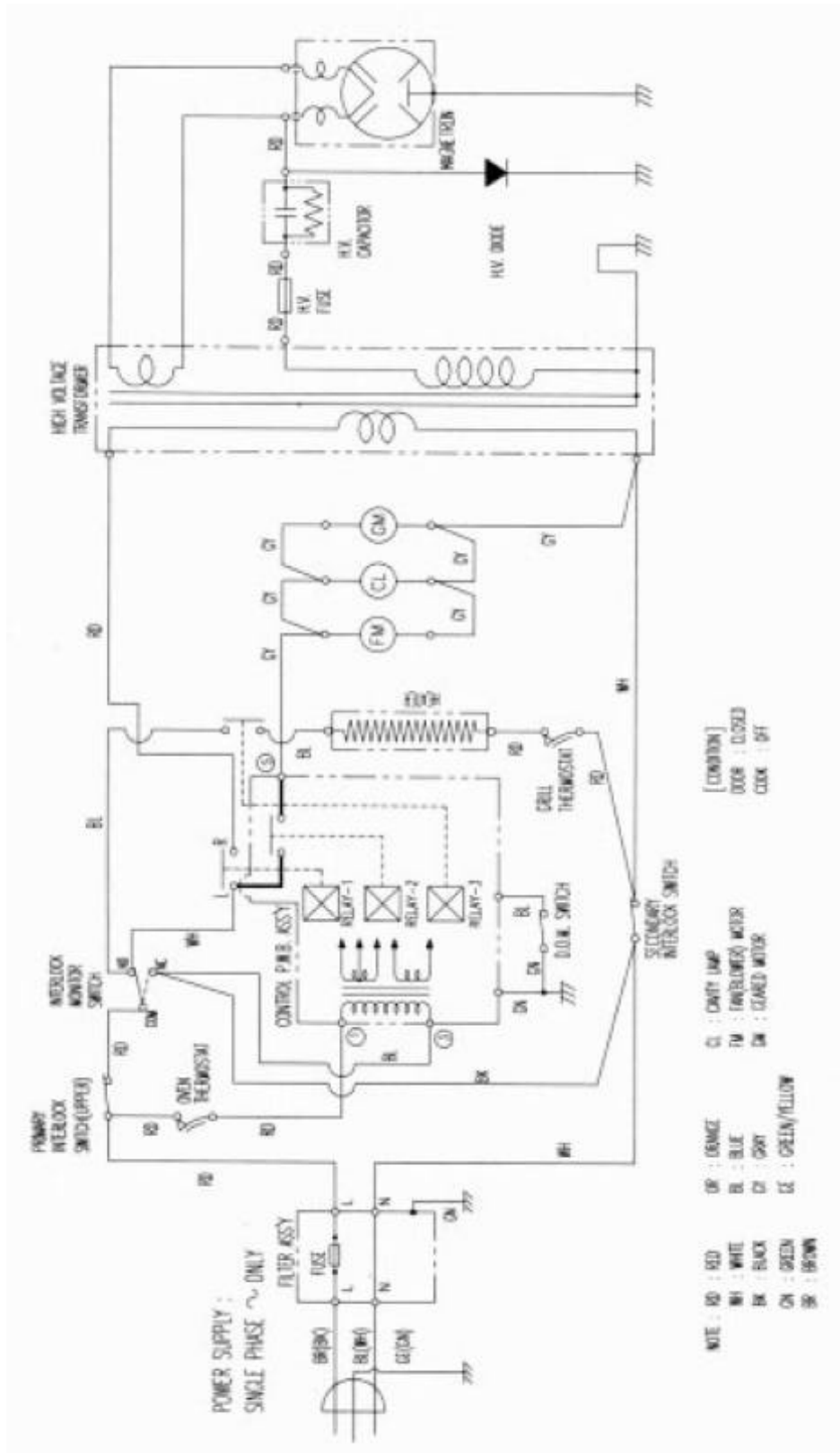
- (1) Isolate magnetron from the circuit by disconnecting the leads.
- (2) A continuity check across magnetron filament terminals should indicate 0.1Ω or less.
- (3) A continuity check between each filament terminal and magnetron case should read open.

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.

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

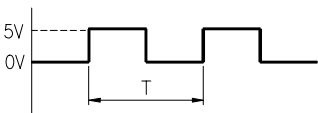
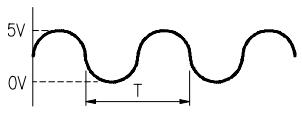
Terminal Voltage	LOAD	NO LOAD
5-6-7	AC 12.6 V	AC 14.7 V

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	IC 1 PIN 5	5VDC
2	IC 1 PIN 8	 <p>T : 20ms(50Hz)</p>
3	IC 1 PIN 35 OR PIN 36	 <p>T : 250ns(4MHz)</p>

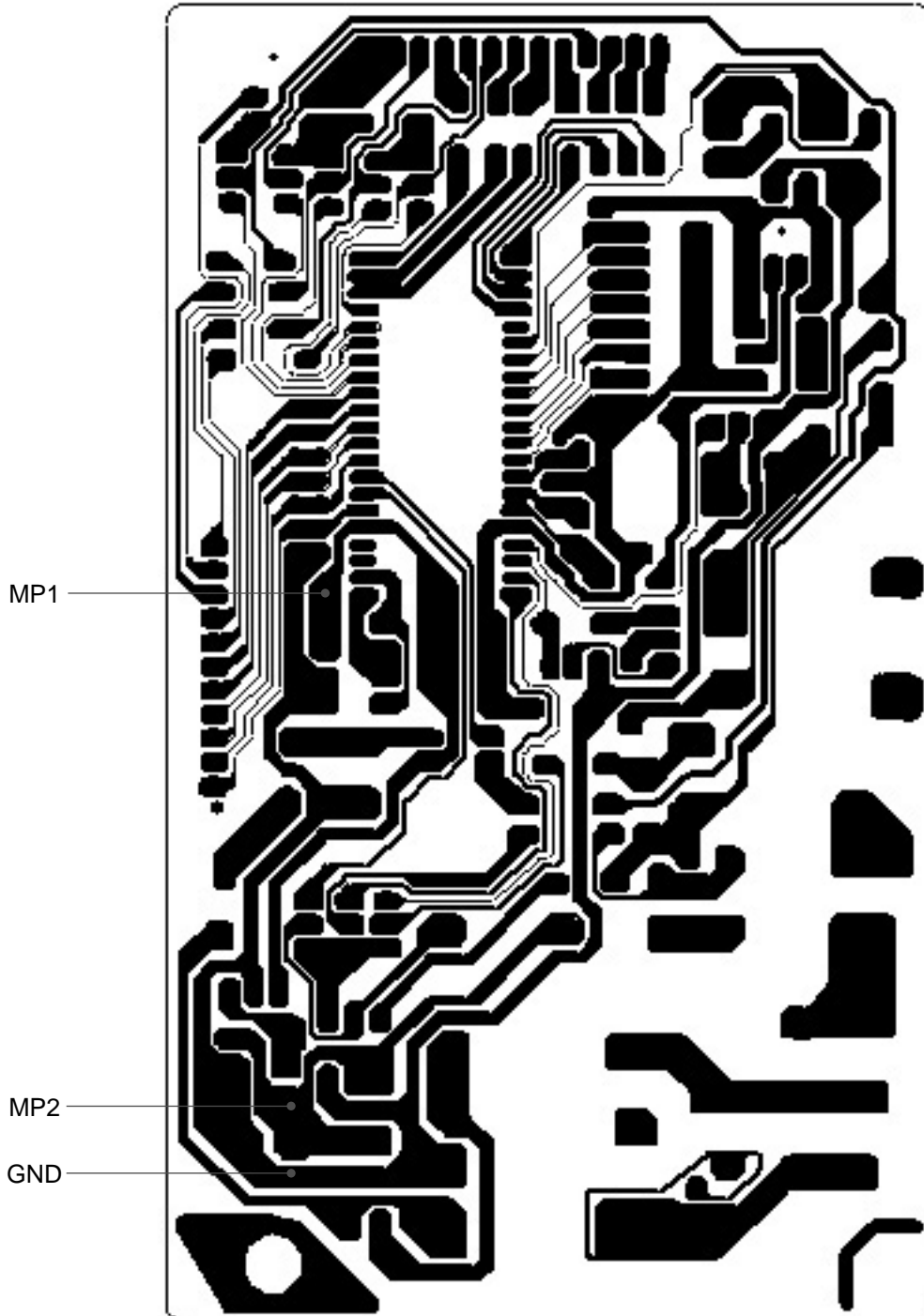
- Check method

NO	MEASURE POINT	WAVE FORM	REMEDY	REMARK
1	MP1	DC 5V \pm 0.25V	Replace VL1, EC1	NO LOAD
2	MP2	DC 12V \pm 2.0V	Replace EC2, D11, D13, D14	NO LOAD

NOTE

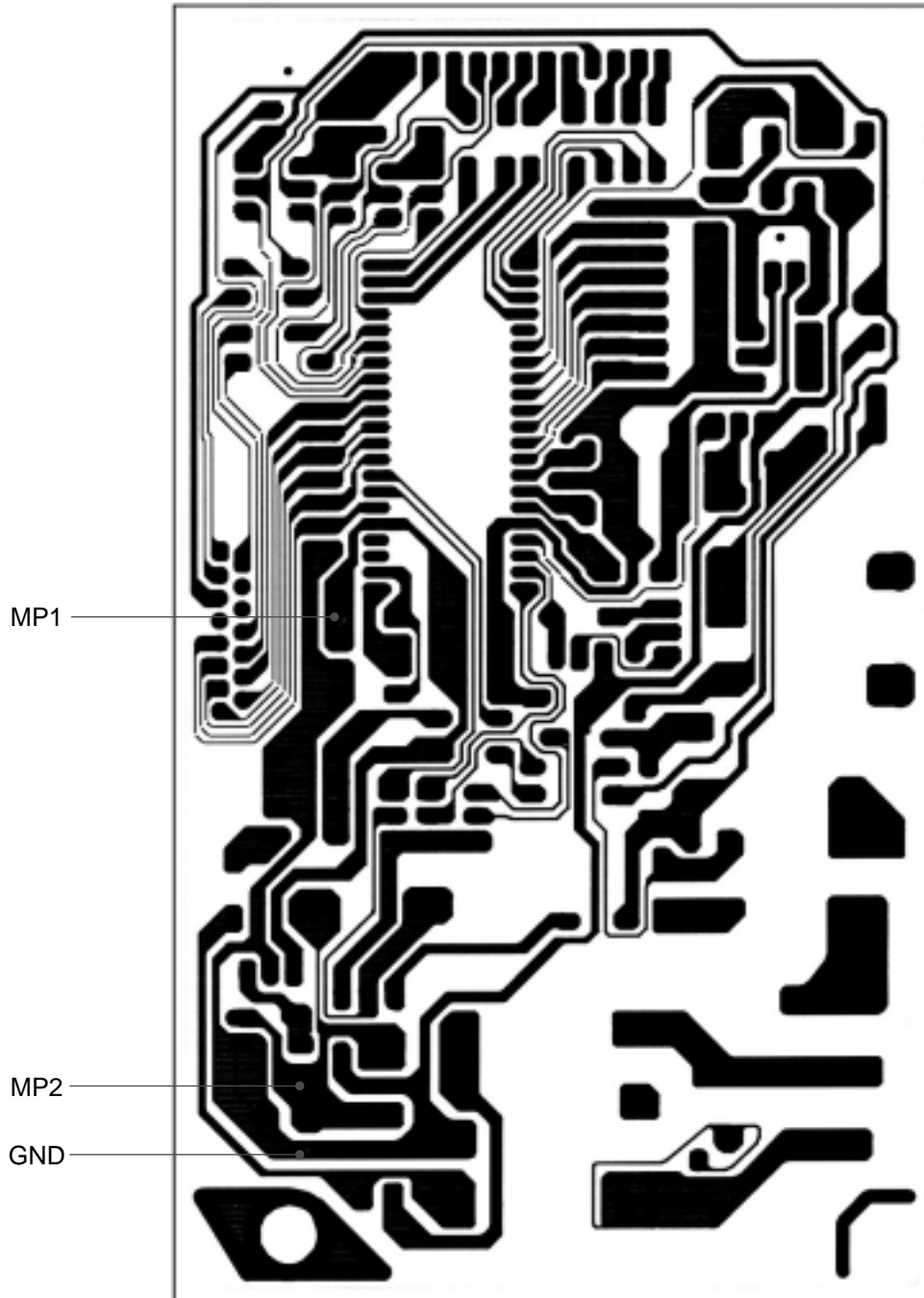
Each measure point must be measured with GND points.

(KQG-6C4R5S)



Measure Point

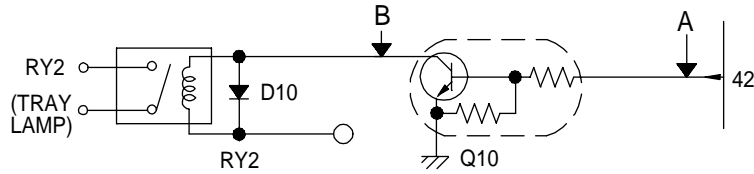
(KQG-6C5R5S)



Measure Point

3. When there is no microwave oscillation

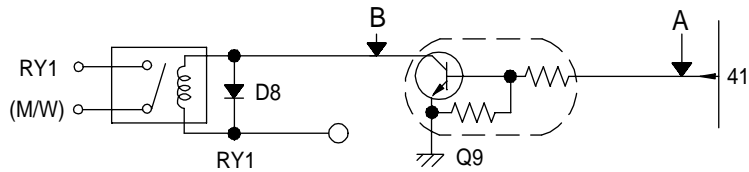
- 1) When touching **START** pad, oven lamp does not turn on.
Fan motor does not rotate, but cook indicator in display comes on.



- Check method

STATE	POINT	A	B
RELAY 2 ON		5VDC	GND
RELAY 2 OFF		GND	12VDC

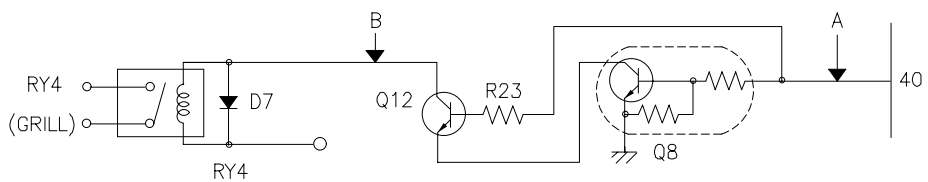
- 2) When touching **START** pad, oven lamp turns on.
Fan motor and turntable rotate and cook indicator in display comes on.



- Check method

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

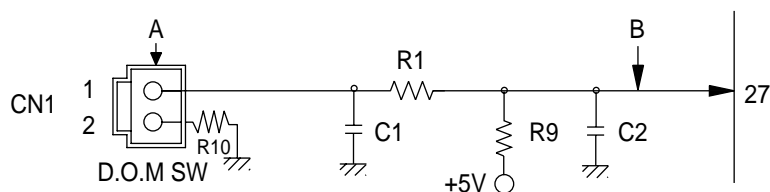
4. When there is no grillwave oscillation



- Check method

STATE	POINT	A	B
RELAY 4 ON		5VDC	GND
RELAY 4 OFF		GND	12VDC

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



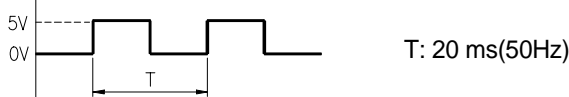
- Check method

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

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

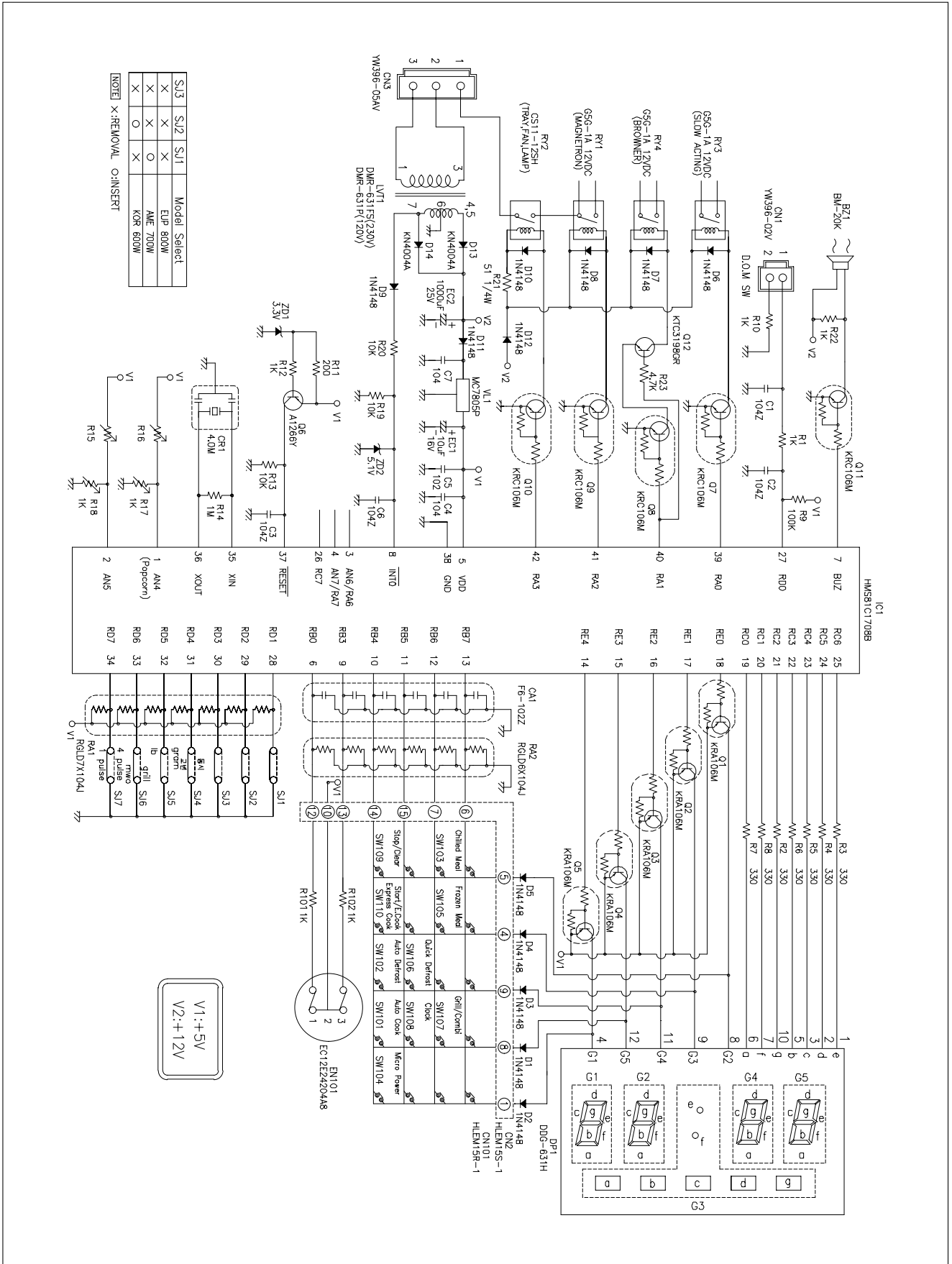
6. When the digital clock does not operate properly.

→ refer to Circuit Diagram.

POINT	WAVE FORM
IC 1 PIN 8	 <p>T: 20 ms(50Hz)</p>

※ If clock does not keep exact time, you must check resistor R20 and zener diode ZD2.

2. P.C.B. CIRCUIT DIAGRAM



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3. P.C.B. LOCATION NO.

NO	NAME	SYMBOL	SPECIFICATION	PART CODE	Q'TY	REMARK
1	PCB MAIN	BOARD	M315	3514330700	1	KQG-6C4R5S
			M319	3514330710	1	KQG-6C5R5S
2	BUZZER	BZ1	BM-20K (BUJEON)	3515600100	1	
3	C ARRAY	CA1	7P(6) 1000PF M 50V 2.54MM	CN6XB-102M	1	
4	C CERA	C5	50V B 1000PF K (AXIAL)	CCZB1H102K	1	
5	C CERA	C1~C4,C6,C7	HIKF 50V 0.1MF Z AXIAL	CCZF1H104Z	6	
6	C ELECTRO	EC1	50V RS 10MF (5X11) TP	CEXE1H100A	1	
7	C ELECTRO	EC2	25V RSS 1000MF(13X20) TP	CEXF1E102V	1	
8	CONN WAFER	CN1	YW396-02V(YEONHO)	3519150520	1	
9	CONN WAFER	CN2	HLEM15S-1	4CW215SBD0	1	
10	CONN WAFER	CN3	YW396-05AV(YEONHO)	3519150510	1	
11	DIODE	D1~D5,D7~D12	1N4148 AUTO 52MM	DZN4148---	11	
12	DIODE	D13,D14	KN4004A AUTO 52MM	DZN4004A--	2	
13	DIODE ZENER	ZD1	UZ-3.3BSB(3.32-3.53V)	DZUZ3R3BSB	1	
14	DIODE ZENER	ZD2	UZ-5.1BSB(4.97-5.18V)	DZUZ5R1BSB	1	
15	IC MICOM	IC1	HMS87C1708B-HN018	150SR6Q4R-	1	
16	IC REGULATOR	VL1	MC7805C(S/S)	1CPMC7805C	1	
17	LED DISPLAY	DP1	LTC-4651HG(631)	DDD631H02	1	
18	R ARRAY	RA1	8P(7) 1/8 100K OHM J	RA-88X104J	1	
19	R ARRAY	RA2	7P(6) 1/8 100K OHM J	RA-87X104J	1	
20	R CARBON FILM	R23	1/6 4.7K OHM J	RD-AZ472J-	1	
21	R CARBON FILM	R2~R8	1/6 330 OHM J	RD-AZ331J-	7	
22	R CARBON FILM	R11	1/6 200 OHM J	RD-AZ201J-	1	
23	R CARBON FILM	R14	1/6 1M OHM J	RD-AZ105J-	1	
24	R CARBON FILM	R1,10,12,17,18,22	1/6 1K OHM J	RD-AZ102J-	6	
25	R CARBON FILM	R13,19,20	1/6 10K OHM J	RD-AZ103J-	3	
26	R CARBON FILM	R9	1/6 100K OHM J	RD-AZ104J-	1	
27	R CARBON FILM	R21	1/4 51 OHM J	RD-4Z510J-	1	
28	RESONATOR CERA	CR1	CRT 4.00MS	5P4R00MTS-	1	
29	SW RELAY	RY1,4	G5G-1A 1C 1P DC12V	5SC0101121	2	
30	SW RELAY	RY2	CS11-12SH 1C 1P	5SC0101128	1	
31	TR	Q12	KTC3198GR (1815GR)	TZTC3198GR	1	
32	TR	Q6	KTA1266Y- (AUTO)(1015Y)	TZTA1266Y-	1	
33	TR	Q1~Q5,Q8~Q11	KRC106M(AUTO)	TZRC106M--	9	
34	TRANS POWER	LVT1	DMR-631FS	5EPV035303	1	
35	WIRE COPPER	J1~J10,J13,J14	1/0.52 TIN COATING	85801052GY	12	7.5mm
36	WIRE COPPER	J11,J12	1/0.52 TIN COATING	85801052GY	2	10mm
1	PCB SUB	BOARD	M316	3514330800	1	KQG-6C4R5S
			M320	3514330810	1	KQG-6C5R5S
2	CONN WAFER	CN101	HLEM15R-1	4CW215RBD0	1	
3	R CARBON FILM	R101,R102	1/6 1K OHM J	RD-AZ102J-	2	
4	SW ROTARY	EN101	EC12E24204A8	5S10302005	1	
5	SW TACT	SW101~SW110	KPT-1115AM	5S50101Z93	10	
6	WIRE COPPER	J101	1/0.52 TIN COATING	85801052GY	1	10mm
7	WIRE FLAT	WF1	15/90 WH C	WSJ-159007	1	

EXPLODED VIEW AND PARTS LIST

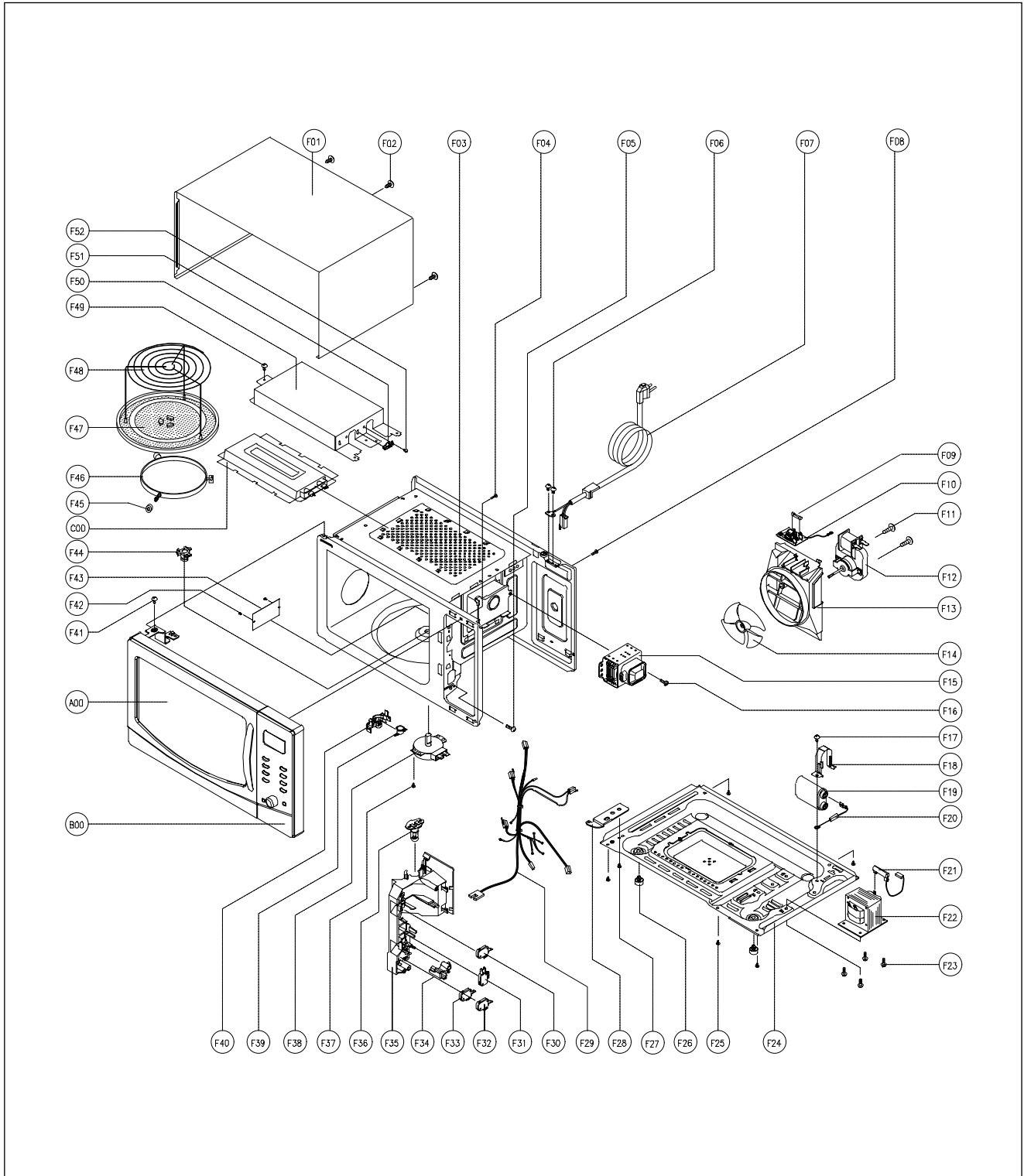
1. DOOR ASSEMBLY

Refer to Disassembly and assembly.

2. CONTROL PANEL ASSEMBLY

Refer to Disassembly and assembly.

3. TOTAL ASSEMBLY



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NO	PART CODE	PART NAME	DESCRIPTION	Q'TY
A00	3511725300	DOOR AS	KOR-6Q4R5S	1
	3511725320		KOR-6Q5R5S	1
B00	PKCPSWBD50	CONTROL-PANEL AS	KQG-6C4R5S	1
	PKCPSWF150		KQG-6C5R5S	1
C00	3512803600	HEATER * T AS	KOG-57350S	1
F01	3510805300	CABINET AS	KOR-61152S	1
F02	7112401011	SCREW TAPPING	T1 TRS 4*10 MFZN	3
F03	3516111900	CAVITY AS	KOG-57350S	1
F04	7122401211	SCREW TAPPING	T2S TRS 4X12 MFZN	1
F05	7122401211	SCREW TAPPING	T2S TRS 4X12 MFZN	1
F06	7112401011	SCREW TAPPING	T1 TRS 4*10 MFZN	2
F07	35113A5QJ5	CORD POWER AS	3X1.5 80X80 120-RTML	1
F08	7112401011	SCREW TAPPING	T1 TRS 4*10 MFZN	1
F09	4414A25110	FUSE	250V 15A	1
F10	3518606100	NOISE-FILTER	DWLF-M13	1
F11	7121402511	SCREW TAPPING	T2S PAN 4X25 MFZN	2
F12	3963512310	MOTOR SHADED POLE	230V 20W MW10CA-M02	1
F13	3512517000	GUIDE WIND	PP	1
F14	3511800300	FAN	PP+30%GLASS	1
F15	3518002400	MAGNETRON	2M218J(F) 5CF	1
F16	3516004000	SPECIAL SCREW	T2 BOLT FLANGE 5X12 DACRO	1
F17	7122400811	SCREW TAPPING	T2S TRS 4*8 MFZN	1
F18	3513003200	HOLDER HV CAPACITOR	SECC T0.6	1
F19	3518302200	CAPACITOR HV	2100VAC 0.98UF #187	1
F20	3518400900	DIODE HV AS	HVR-1X-30B #187	1
F21	3518701100	FUSE HV	5KV 0.55A HV-41A55-02	1
F22	3518119880	TRANS HV	R1S580(EA00)	1
F23	3516003700	SPECIAL SCREW	TT3 HEX 4X8 FLG MFZN	4
F24	3510311700	BASE	SBHG T0.6	1
F25	7112401011	SCREW TAPPING	T1 TRS 4*10 MFZN	5
F26	3512100900	FOOT	PP DASF-130	2
F27	7272400811	SCREW TAPTITE	TT3 TRS 4X8 MFZN	1
F28	3515201101	STOPPER HINGE *U	SCP-1 T2.5	1
F29	3512717600	HARNESS MAIN	KOG-573R0S	1
F30	4415A17352	SW MICRO	VP-533A-OF SPNO #187 200G	1
F31	4415A66910	SW MICRO	VP-531A-OF/SZM-V16-FA-61	1
F32	4415A17352	SW MICRO	VP-533A-OF SPNO #187 200G	1
F33	3518571000	SWITCH PUSH	MP101C	1
F34	3513702610	LEVER LOCK	POM	1
F35	3513811710	LOCK	POM BLACK	1
F36	3513601600	LAMP	BL 240V 25W T25 C7A H187	1
F37	7121400611	SCREW TAPPING	T2S PAN 3X6 MFZN	1
F38	3966310100	MOTOR SYNCRO	220V 2.5W GM-16-24FD12	1
F39	3518905300	THERMOSTAT	OFF:75 ON:65 H #187 NB	1
F40	3513003410	HOLDER THERMOSTAT	PP(BK)	1
F41	7272400811	SCREW TAPTITE	TT3 TRS 4X8 MFZN	1
F42	4078502031	BUTTON LOCKING	PP HONAM A353	1
F43	3511405100	COVER WAVE GUIDE	MICA T0.35	1
F44	3517402130	COUPLER	XAREC	1
F45	3514700900	ROLLER	TEFLON	3
F46	3512509210	GUIDE ROLLER	PP 5113MF6 A353B	1
F47	3517203610	TRAY	BORO-SI GLASS(NEG)	1
F48	3517204510	TRAY RACK	MSWR3 94MM DIA:3	1
F49	7112401011	SCREW TAPPING	T1 TRS 4*10 MFZN	1
F50	3511408200	COVER INSULATOR *T	SBHG T0.6	1
F51	3518905900	THERMOSTAT	OFF:75 ON:65 V #187	1
F52	7121400611	SCREW TAPPING	T2S PAN 3X6 MFZN	1



DAEWOO ELECTRONICS CORP.
686, AHYEON-DONG MAPO-GU SEOUL, KOREA
C.P.O. BOX 8003 SEOUL, KOREA
TELEX: DWELEC K28177-8
CABLE: "DAEWOOELEC"

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S/M NO. :