

S/M No. :

Service Manual

Microwave Oven

Model: KOM-9F2CTS

KOM-9F2CKS

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 (<http://svc.dwe.co.kr>).

DAEWOO 
ELECTRONICS

May. 2012

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 if 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.

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SAFETY AND PRECAUTIONS

CAUTION : This Device is to be Serviced Only by Properly Qualified Service Personnel. Consult the Service Manual for Proper Service Procedures to Assure Continued Safety Operation and for Precautions to be Taken to Avoid Possible Exposure to Excessive Microwave Energy.

1. FOR SAFE OPERATION

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

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

(Only a trained service personnel should make repairs.)

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

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

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

DO NOT ATTEMPT TO OPERATE THIS APPLIANCE WITH THE DOOR OPEN. The microwave oven has concealed switches to make sure the power is turned off when the door is opened. Do not attempt to by-pass.

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

2. FOR SAFE SERVICE PROCEDURES

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

CAUTION

MICROWAVE RADIATION

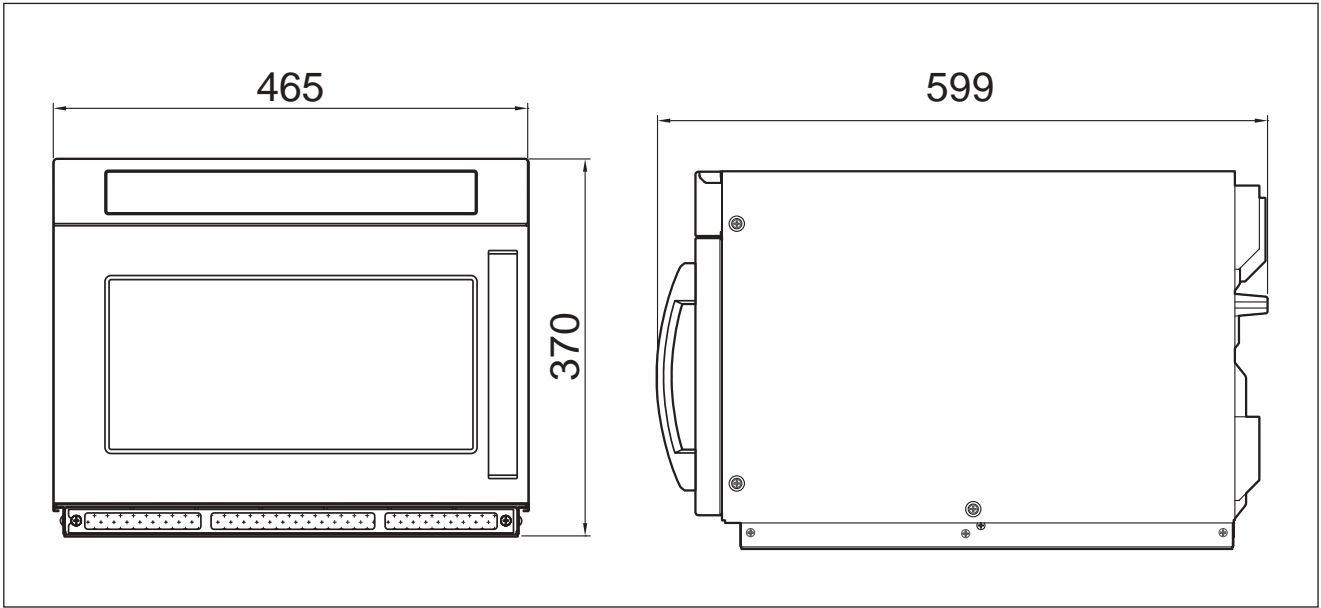
PERSONNEL SHOULD NOT BE EXPOSED TO THE MICROWAVE ENERGY WHICH MAY RADIATE FROM THE MAGNETRON OR OTHER MICROWAVE GENERATING DEVICE IF IT IS IMPROPERLY USED OR CONNECTED. ALL INPUT AND OUTPUT MICROWAVE CONNECTIONS, WAVEGUIDES FLANGES AND GASKETS MUST BE SECURED. NEVER OPERATE THE DEVICE WITHOUT A MICROWAVE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

SPECIFICATIONS

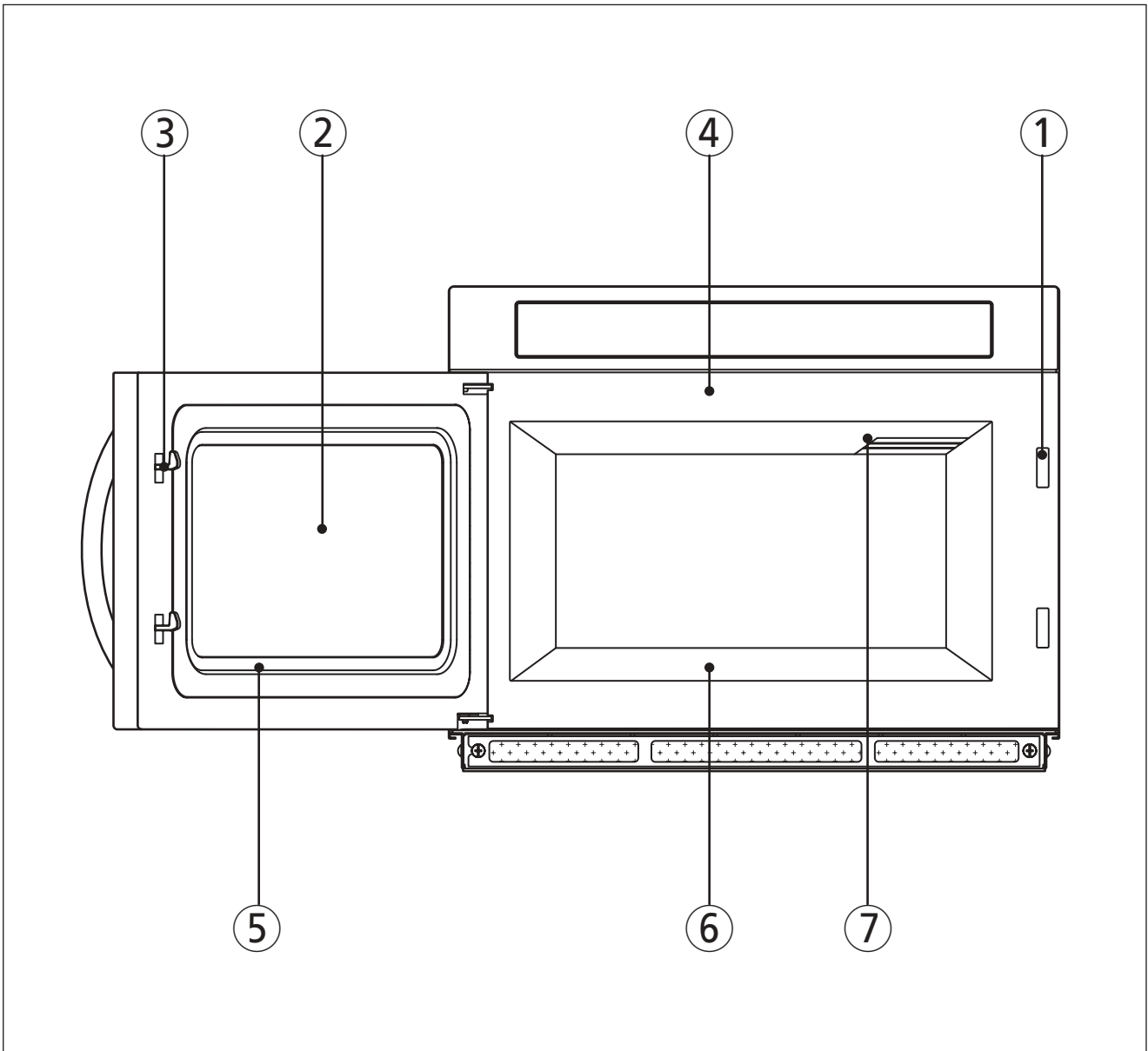
MODEL		KOM-9F2CTS	KOM-9F2CKS
POWER SUPPLY		240V AC 50Hz SINGLE PHASE WITH EARTHING	
MICROWAVE	POWER CONSUMPTION	3000W	2600W
	OUTPUT POWER	1850W	1500W
	FREQUENCY	2450Mhz	2450Mhz
OUTSIDE DIMENSIONS (W X H X D)		465 X 370 X 599 mm (18.31 X 14.57 X 23.58 in.)	
CAVITY DIMENSIONS (W X H X D)		371 X 198.5 X 372 mm (14.61 X 7.81 X 14.66 in.)	
CAVITY VOLUME		0.9 cu.ft	
NET. WEIGHT		APPROX. 34kg(75.1lbs)	APPROX. 32.5kg(71.7lbs)
TIMER		60 min.	
POWER SELECTIONS		5 LEVELS	

EXTERNAL VIEW

1. OUTER DIMENSION

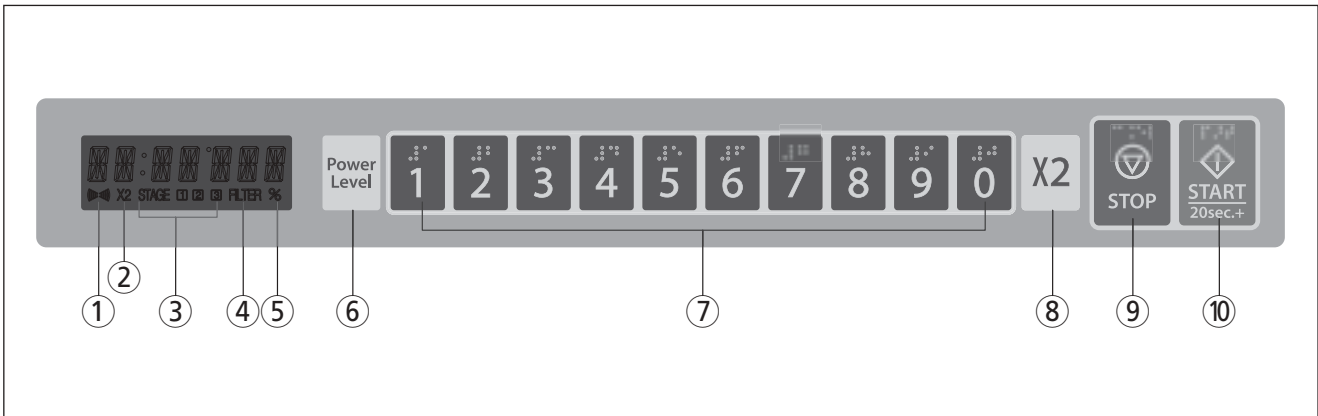


2. FEATURE DIAGRAM



- ① **Safety Interlock System.**
- ② **Door Viewing Screen** - Allows viewing of food. The screen is designed so that light can pass through, but not the microwave.
- ③ **Door Hook** - When door is closed, it will automatically shut off. If the door is opened while the oven is operating, magnetron will immediately stop operating.
- ④ **Oven Cavity.**
- ⑤ **Door Seal** - Door seal maintains the microwave energy within the oven cavity and prevents microwave leakage.
- ⑥ **Plate Tray** - Made of special heat resistant material. Food in a proper receptacle is placed on this plate for cooking.
- ⑦ **Ceiling Cover** - This is located on top side of the oven.

3. CONTROL PANEL



- ① MICROWAVE indicator**
It will turn on when the magnetron output actually is on.
- ② Double Quantity indicator**
It will turn on when DOUBLE QUANTITY pad is pressed.
- ③ STAGE indicator**
It will blink the ongoing stage number of its all cooking stages.
- ④ CLEAN FILTER indicator**
It will turn on during clean filter message displaying.
- ⑤ POWER LEVEL indicator**
It will turn on when POWER LEVEL pad is pressed except full power.
- ⑥ POWER LEVEL pad**
POWER LEVEL pad is used to set a variable power level.
- ⑦ Number pads**
Number pads are used to set the manual cooking time.
It is also used to start preprogrammed cooking cycle.
- ⑧ DOUBLE QUANTITY pad**
X2 pad increases a preprogrammed cooking time by a percentage of the original cooking time. The user specifies the percentage and it can be changed for individual cooking sequences. This feature is very useful for cooking multiple servings of foods.
- ⑨ STOP pad**
STOP pad stops a cooking sequence in progress, clears out any remaining time, and also ends programming or user option cycle. When STOP pad is used to end a programming or option change, the changes are discarded.
- ⑩ START/ 20sec.+ pad**
START pad is used to begin a manual cooking cycle.
It is also used to save any changes to programming sequences or user options. START pad can be used as speedy cooking pad. In ready mode, 20sec.+ pad allows you to reheat for 20 seconds at full power by pressing it. By repeatedly touching 20sec.+ pad, you can also extend reheating time to 5 minutes by 20 second increments.

INSTALLATION

1. Steady, flat location.

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

2. Leave space behind and side.

All air vents should be kept clear. If all vents are covered during operation, the oven may be overheated 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. 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 13 amperes, 240Volts,50Hz.

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

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.

OPERATIONS AND FUNCTIONS

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 in the cavity.
4. Close the door firmly.
5. The oven could be stopped at any time during operation by opening the oven door.
To restart the oven, close the door and then touch START pad.
6. Each time pad is touched, a BEEP will sound.
7. When STOP pad is touched during the oven operation, the oven stops cooking and all information retained.
To erase all information, touch STOP pad once more. If the oven door is opened during the oven operation, all information is retained.
8. If the START pad is touched and the oven does not operate, check the area between the door and door is closed firmly.
The oven will not start cooking until the door is completely closed or the program has been reset.

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

Wattage output chart

The power level is set by touching the Power Level pad. The chart shows the display, the power level and the percentage of power.

Power Level Pad	Power level (Display)	Approximate Percentage of Power
Once	HI	100%
Twice	70%	70%
3 times	50%	50%
4 times	20%	20%
5 times	0%	0%

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 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 earthed.

Do not operate on a 2-wire extension cord.

The microwave oven is designed to be used with earthed.

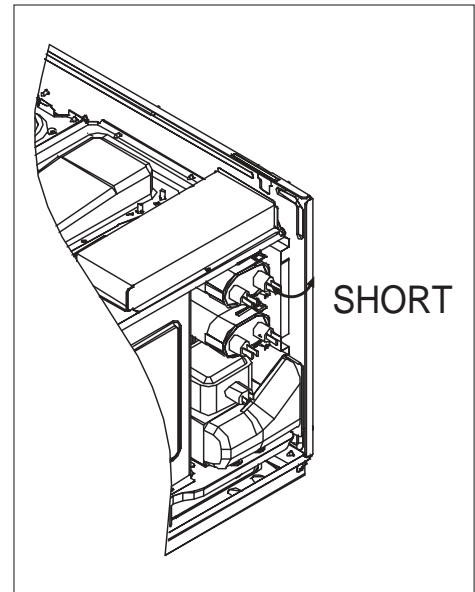
It is imperative, therefore, to make sure it is earthed properly before beginning repair work.

(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.

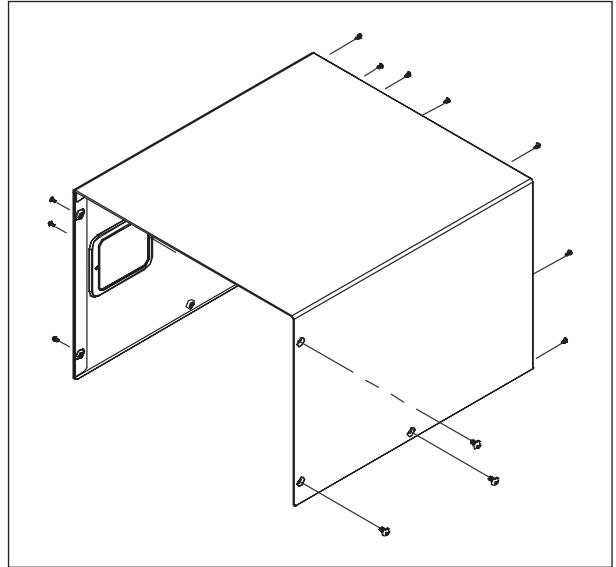


CAUTION : Service personnel should remove their watches whenever working close to or replacing the magnetron.

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.

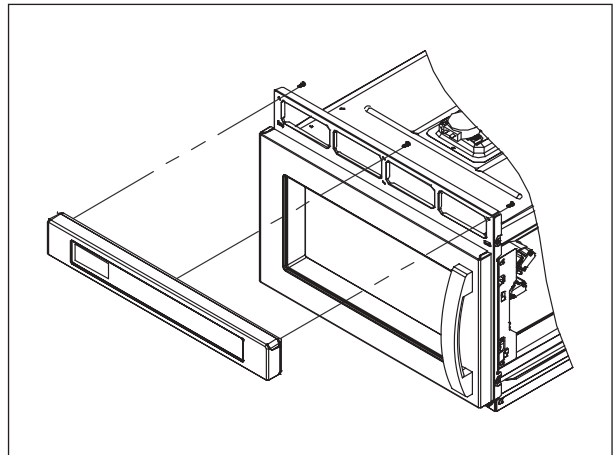
1. To remove cabinet

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



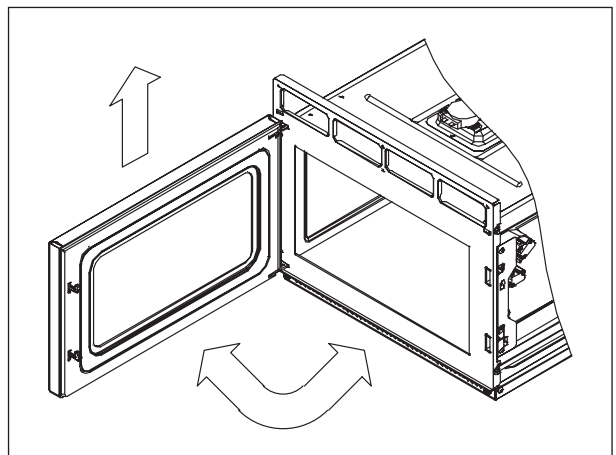
2. To remove control panel assembly

- 1) Remove three screws which secure the front plate.
- 2) Remove the control panel assembly from front plate of cavity.
- 3) Reverse the above for reassembly.



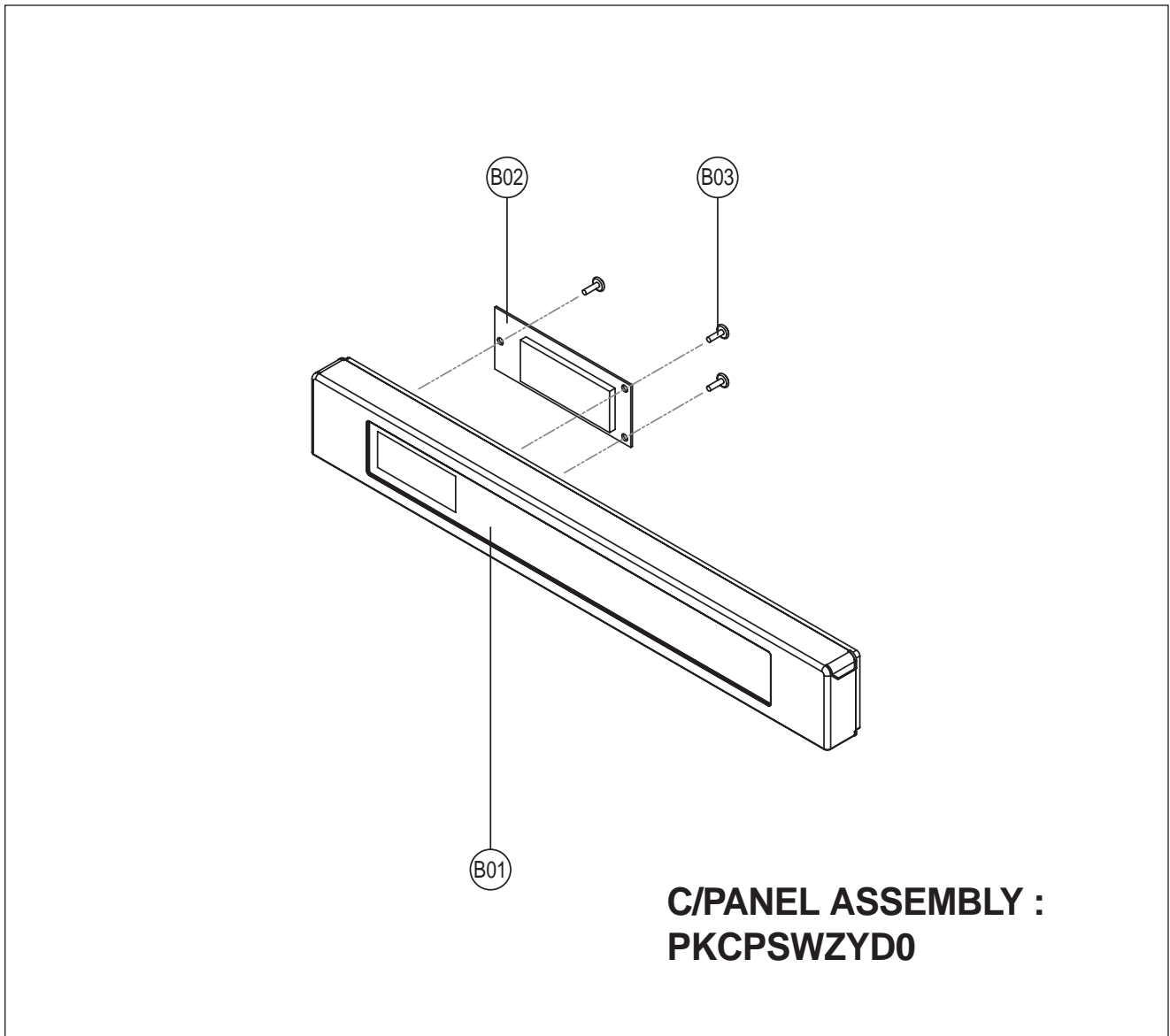
3. To remove door assembly

- 1) Open the door assembly and lift the door assembly.
- 2) Reverse the above for reassembly.



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

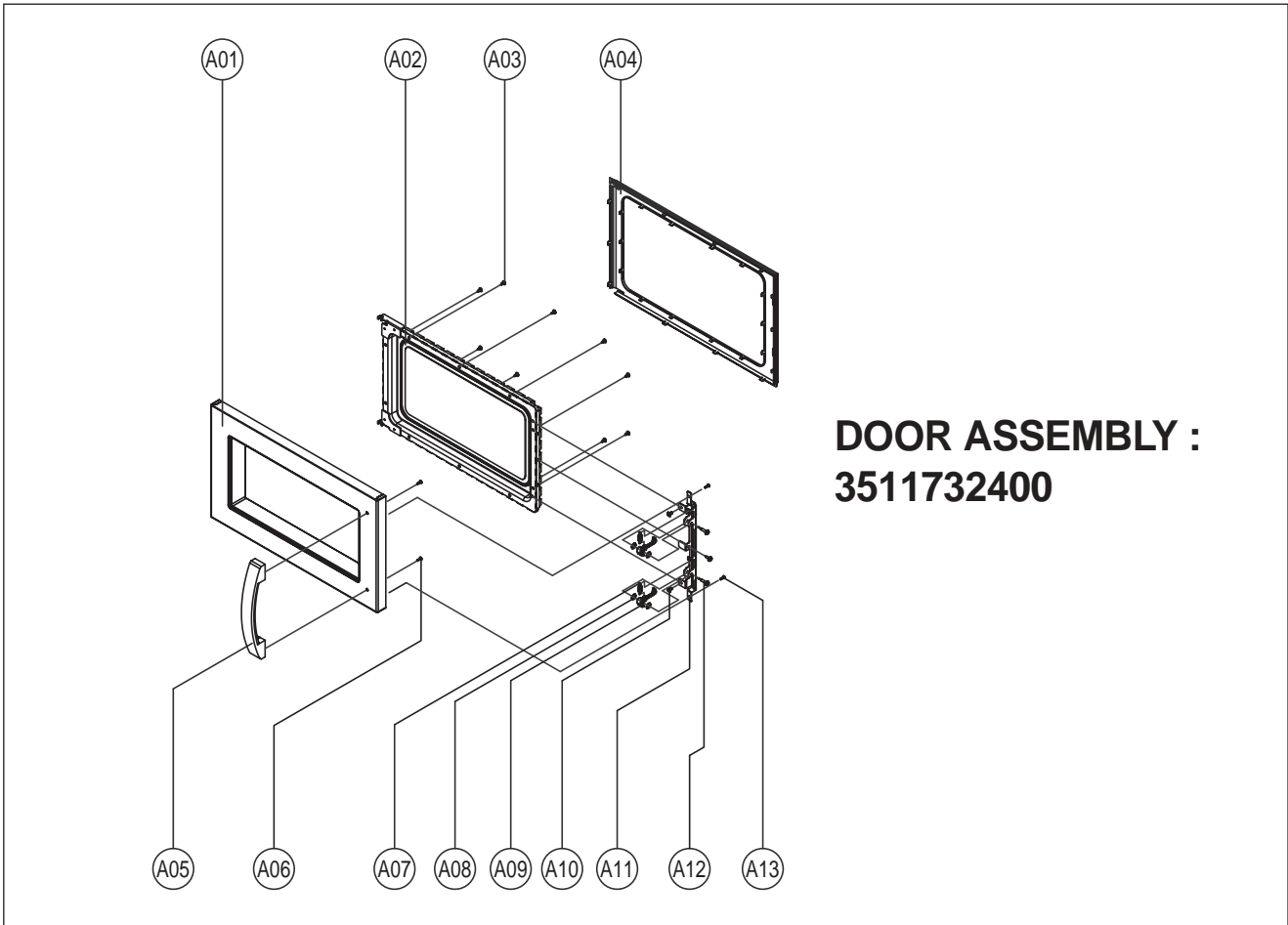
4. To remove control panel parts.



REF. NO	PART CODE	PART NAME	DESCRIPTION	Q'TY	REMARK
B01	3516742100	CONTROL-PANEL	ABS SG-175, SG-0760D	1	
B02	3514333500	PCB SUB AS	KOM-9F0CTS	1	
B03	7122401211	SCREW TAPPING	T2S TRS 4*12 MFZN	3	

- 1) Remove three screw which secure the control panel, push up two snap fits and draw forward the control panel assembly.
- 2) Remove three screws which secure the PCB assembly to control panel.
- 3) Reverse the above steps for reassembly.

5. To remove door parts.

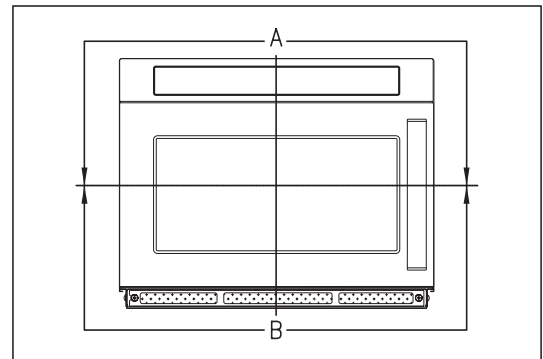


REF. NO	PART CODE	PART NAME	DESCRIPTION	Q'TY	REMARK
A01	3512211600	FRAME DOOR	ABS SG-175, SG-0760D	1	
A02	3511732410	DOOR SEAL AS	KOM-9F2CTS	1	
A03	7122400811	SCREW TAPPING	T2S TRS 4*8 MFZN	9	
A04	3512303300	GASKET DOOR	PP GP2300	1	
A05	3512604340	HANDLE DOOR	AL	1	
A06	7122401211	SCREW TAPPING	T2S TRS 4*12 MFZN	2	
A07	3515103710	SPRING HOOK	PW1 1.0DIA.	2	
A08	7400505050	WASHER HOOK	PTFE	4	
A09	3513102340	HOOK *T	ZN COATING	2	
A10	7272400811	SCREW TAPTITE	TT3 TRS 4X8 MFZN	3	
A11	3510613360	BRACKET HOOK	PO T1.6	1	
A12	7173401217	SCREW TAPTITE	TT3 TRS 3X19 MFZN HOOK	2	
A13	7122401211	SCREW TAPPING	T2S TRS 4*12 MFZN	2	

- 1) Remove the gasket door from the door assembly.
- 2) Remove eleven screws from the door assembly.
- 3) Remove the door seal assembly from the door assembly.
- 4) Remove three screws from door seal assembly.
- 5) Remove the bracket hook from the door seal assembly.
- 6) Remove two springs from the bracket hook.
- 7) Remove two screws from the bracket hook.
- 8) Remove two hooks and four washer hooks from the bracket hook
- 9) Remove two screws from frame door.
- 10) Remove the handle door from frame door.
- 11) Reverse the above steps for reassembly.

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

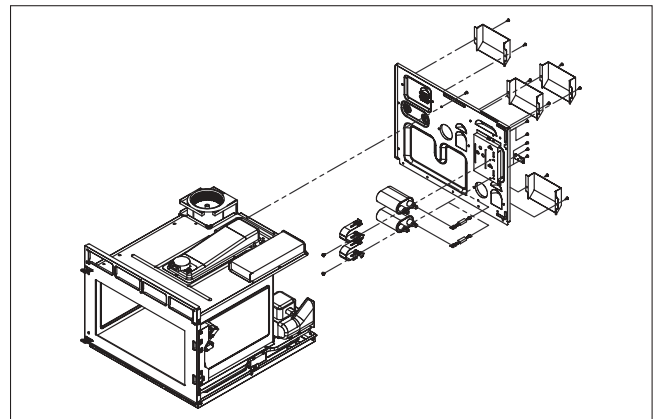
- (1) To reduce gap located on part 'A'
 - Loosen screws on top of lock and then, close the door with adjusting gap of front surface of oven.
 - Tighten screw.
- (2) To reduce gap located on part 'B'
 - Loosen screws on under of lock and then, close the door with adjusting gap of front surface of oven.
 - Tighten screw.



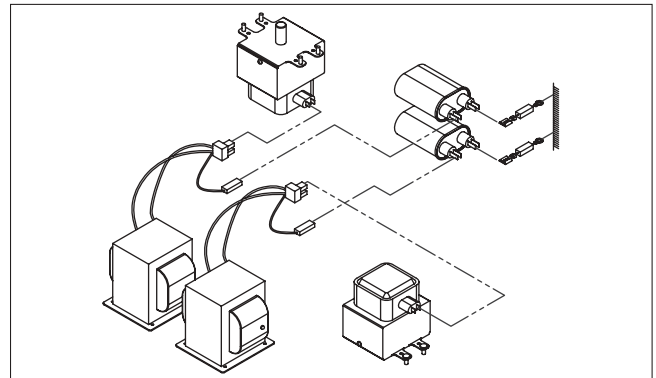
NOTE : A small gap may be acceptable if the microwave leakage does not exceed $4\text{mW}/\text{cm}^2$.

7. To remove high voltage capacitor.

- 1) Remove each two screws which secure four cover exhausts.
- 2) Remove fourteen screws which secure rear plate assembly.
- 3) Remove each screw which secures two grounding ring terminal of the H.V. diode and two capacitor holder.
- 4) Remove two H.V. diode from the capacitor holder.
- 5) Reverse the above steps for reassembly.

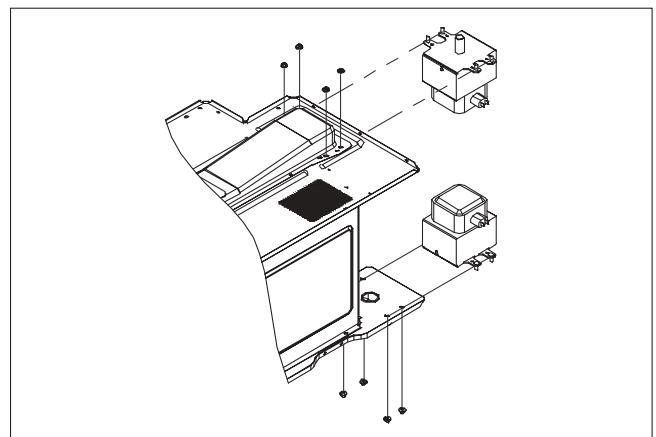


◆ High voltage circuit wiring

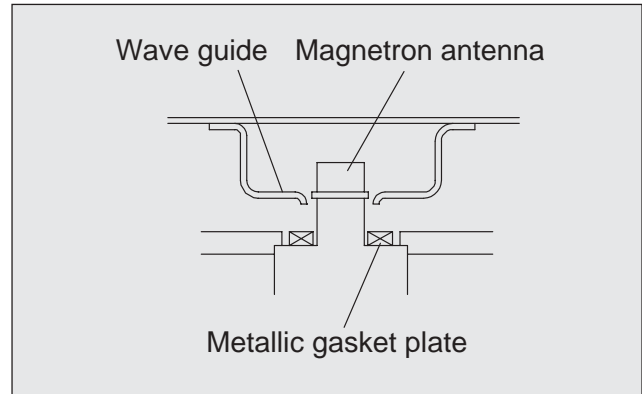
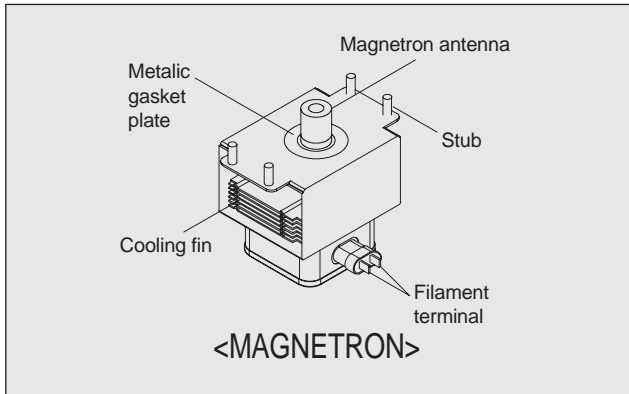


8. To remove magnetron.

- 1) Remove each four nuts which secure the magnetrons.
- 2) Remove the two magnetrons.
- 3) Reverse the above steps for reassembly.

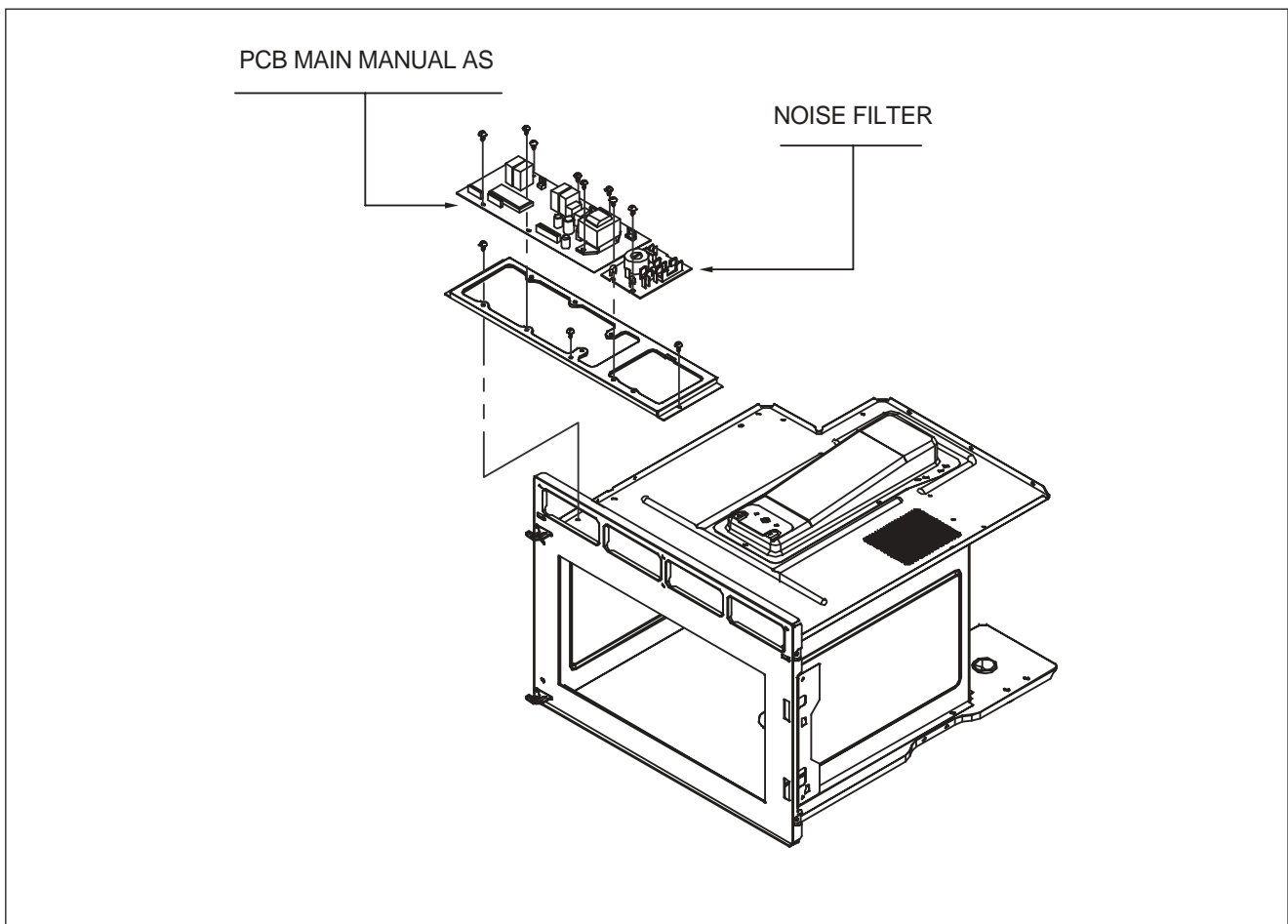


NOTE : Never install the magnetron without the metallic gasket plate which is packed with each magnetron to prevent microwave leakage. Whenever repair work is carried out on magnetron, check the microwave leakage. It shall not exceed $4\text{mW}/\text{cm}^2$ for a fully assembled oven with door normally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



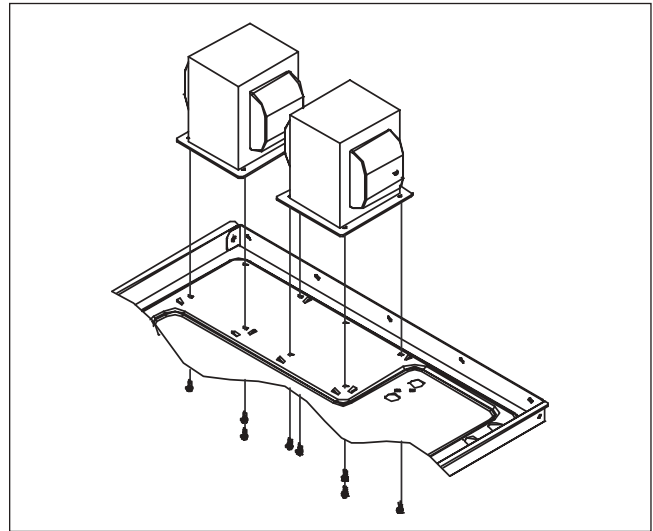
9. To remove PCB main manual AS, noise-filter.

- 1) Remove six screws PCB main manual AS.
- 2) Remove two screws noise-filter.
- 3) Reverse the above steps for reassembly.



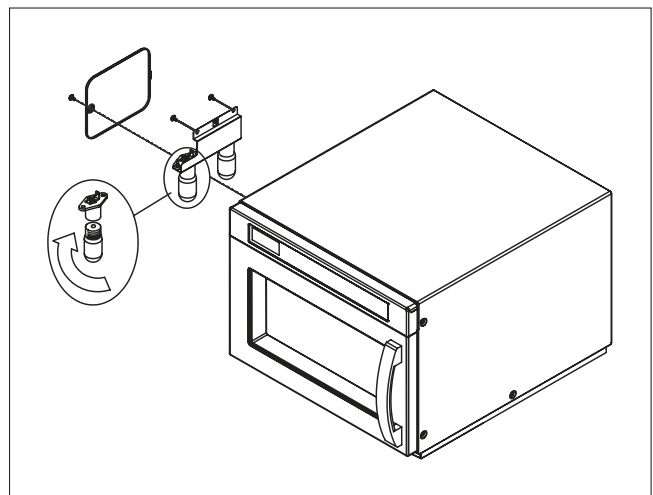
10. To remove H.V.transformer.

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



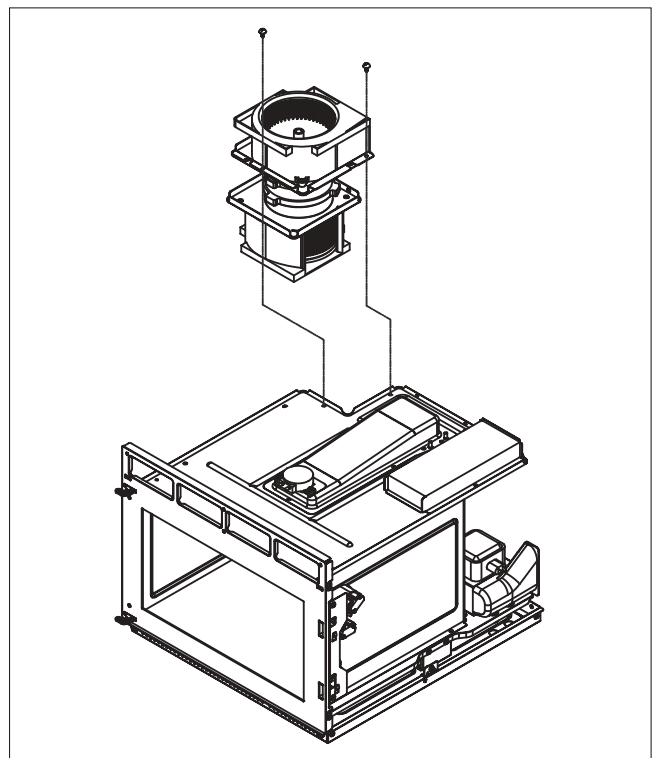
11. To remove lamp.

- 1) Remove one screws holding the cover lamp.
- 2) Remove counterclockwise direction lamp from the bracket lamp.
- 3) Reverse the above steps for reassembly.



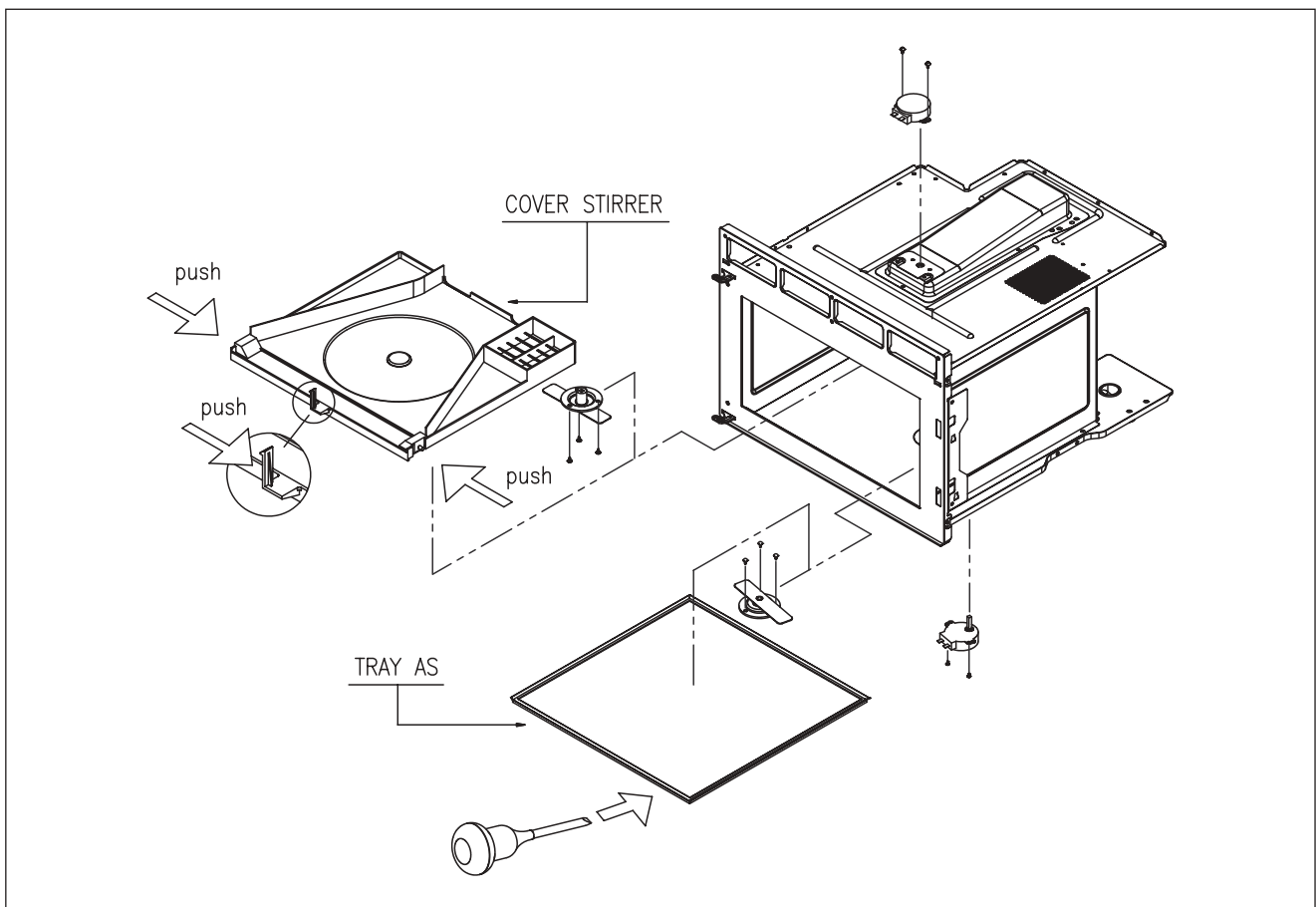
12. To remove motor ventilation.

- 1) Remove two screws holding the motor ventilation.
- 2) Remove motor ventilation from the cavity.
- 3) Reverse the above steps for reassembly.



13. To remove motor syncro.

- 1) Push left side of stopper in centre of cover stirrer and separate it from cavity.
- 2) Hold side stoppers of cover stirrer with both hands and pull down. Then take off the cover stirrer out of the oven cavity
- 3) Remove three fixture supporter stirrer holding the stirrer *t.
- 4) Remove stirrer *t from the cavity.
- 5) Insert a flat-head type screwdriver tray front equivalent approx.
- 6) Carefully lift up the floor tray by using the screwdriver until the floor shelf is lifted up over the level of oven opening front.
- 7) Remove tray from the cavity.
- 8) Remove three fixture supporter stirrer holding the stirrer *u.
- 9) Remove stirrer *u from the cavity.
- 10) Remove two screws holding the motor syncro.
- 11) Remove motor syncro from the cavity.
- 12) Reverse the above steps for reassembly.

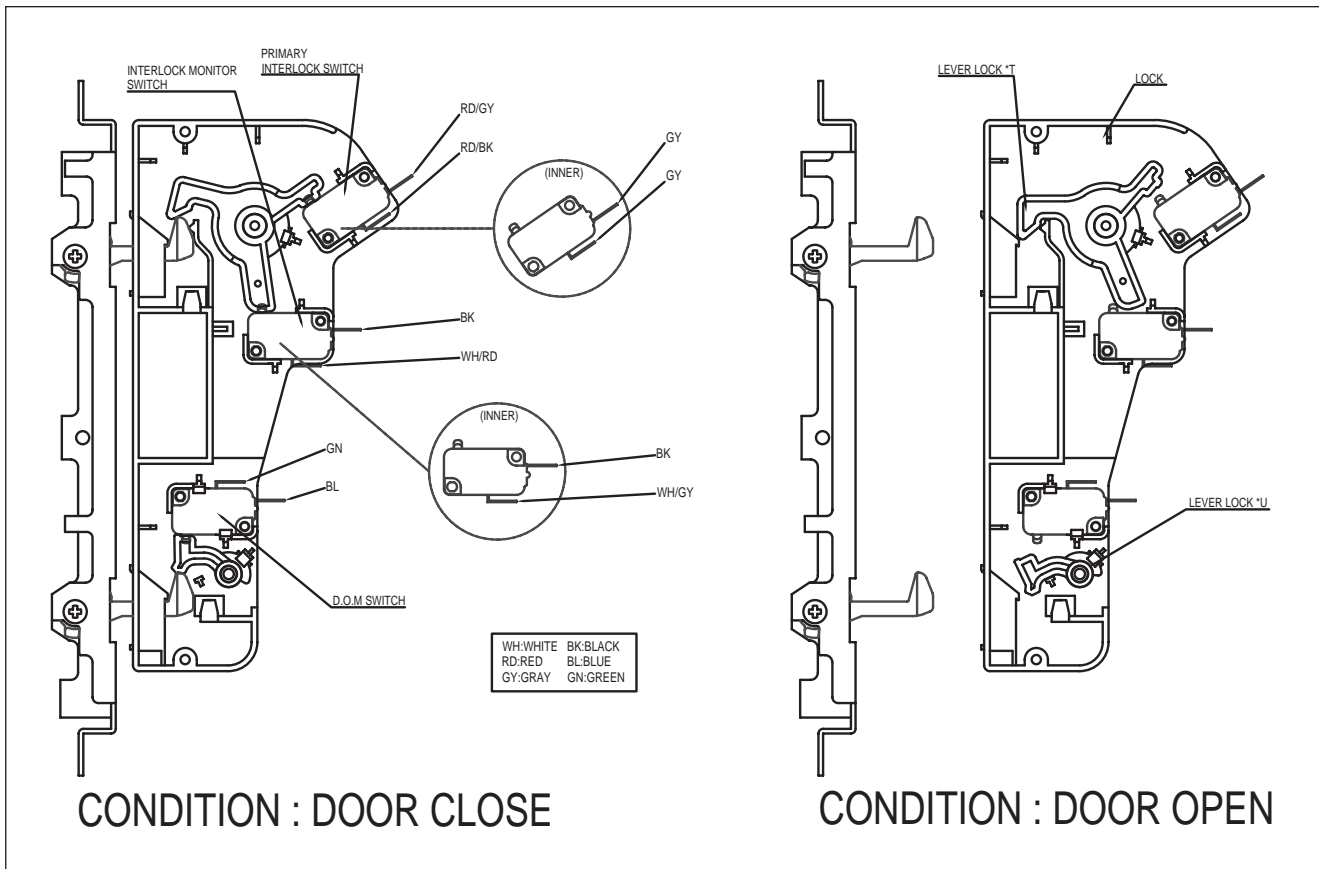


NOTE:

When replacing the moving antenna, make sure the plastic stirrer spacers are correctly in place.

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 and interlock monitor 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 lock lever upward. The lock lever presses the button of the primary interlock switch to bring it under NO condition. The lock lever presses the button of the interlock monitor switch to bring it under NO condition.

(2) D.O.M switch

When the door is closed, the hook pushes the lock lever upward. The lock lever presses the button of the primary interlock switch to bring it under NO 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

- a) Loosen two mounting screws.
- b) Adjust interlock switch assembly position.
Actuation distance of primary and secondary interlock switch shall be adjusted almost 0mm.
- c) Make sure that lock lever moves smoothly after adjustment is completed.
- d) 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.

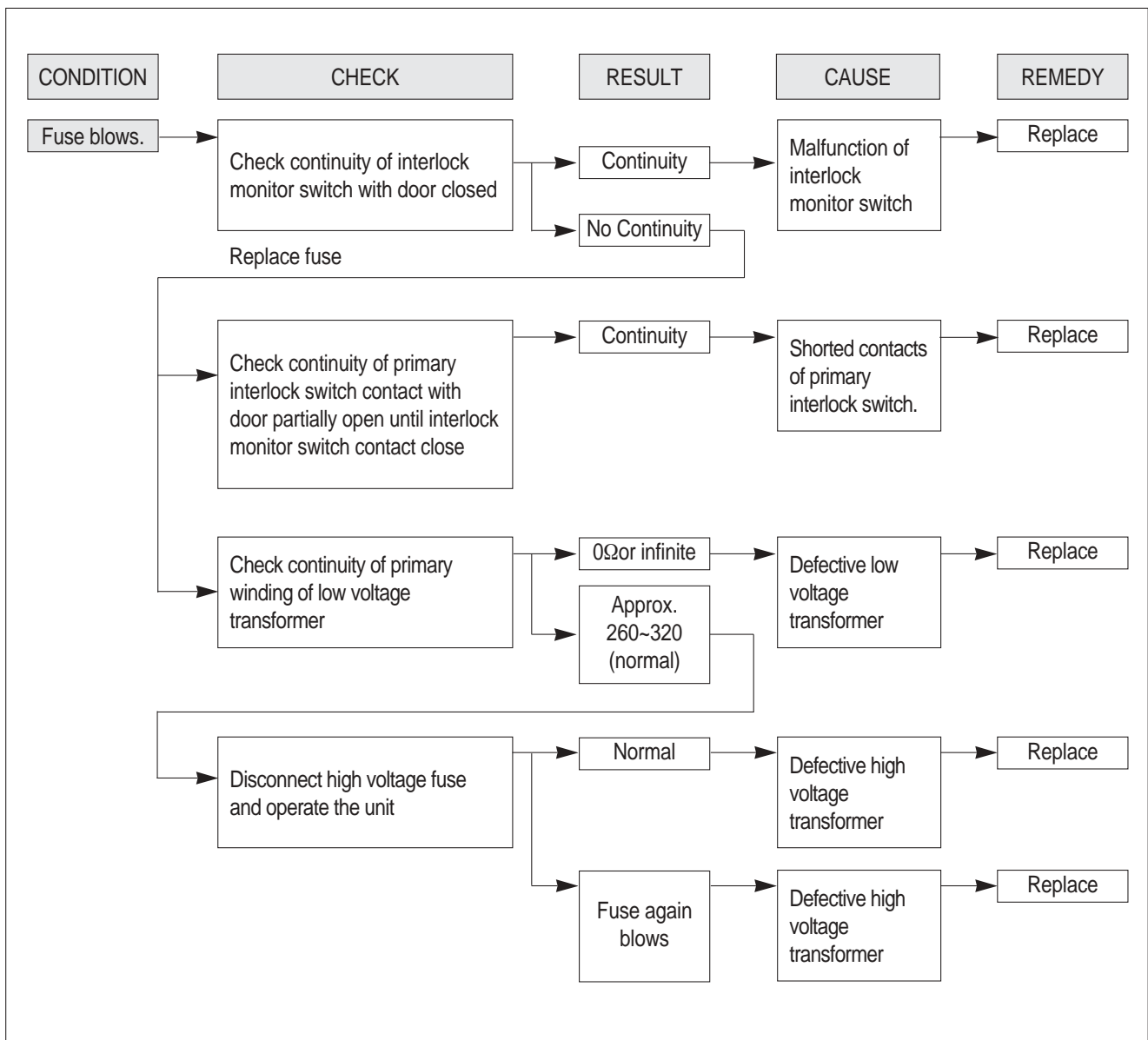
TROUBLESHOOTING GUIDE

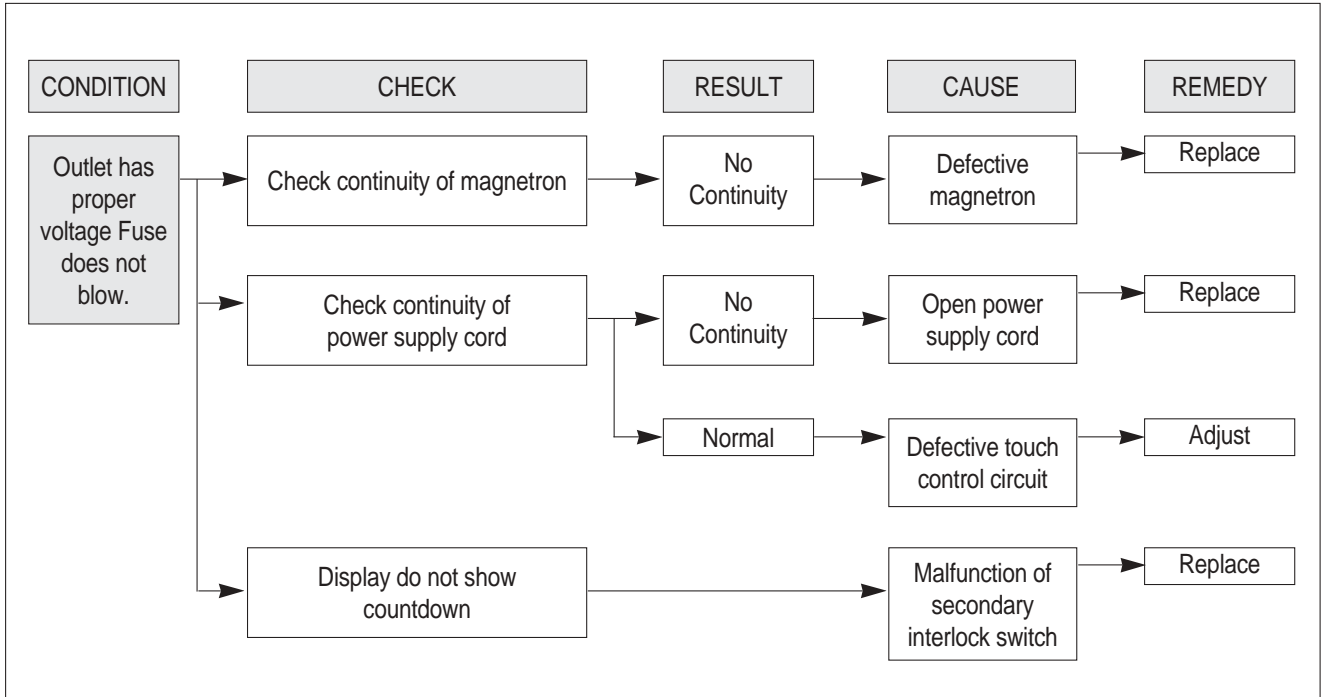
Following the procedure below to check if the oven is defective or not.

- 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 load 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 connection of the terminals and power cord before check the parts listed below.

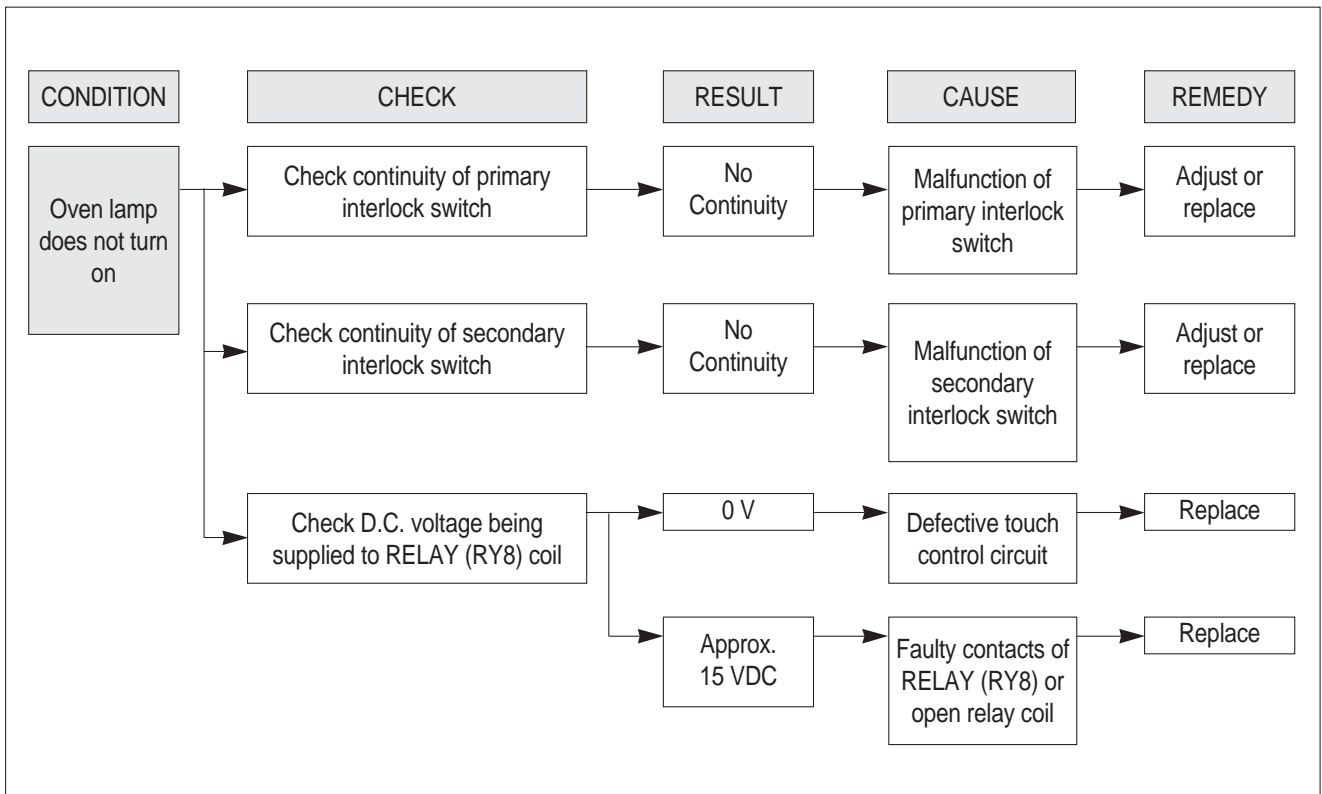
(TROUBLE 1) Oven does not operate at all : any inputs can not be accepted.

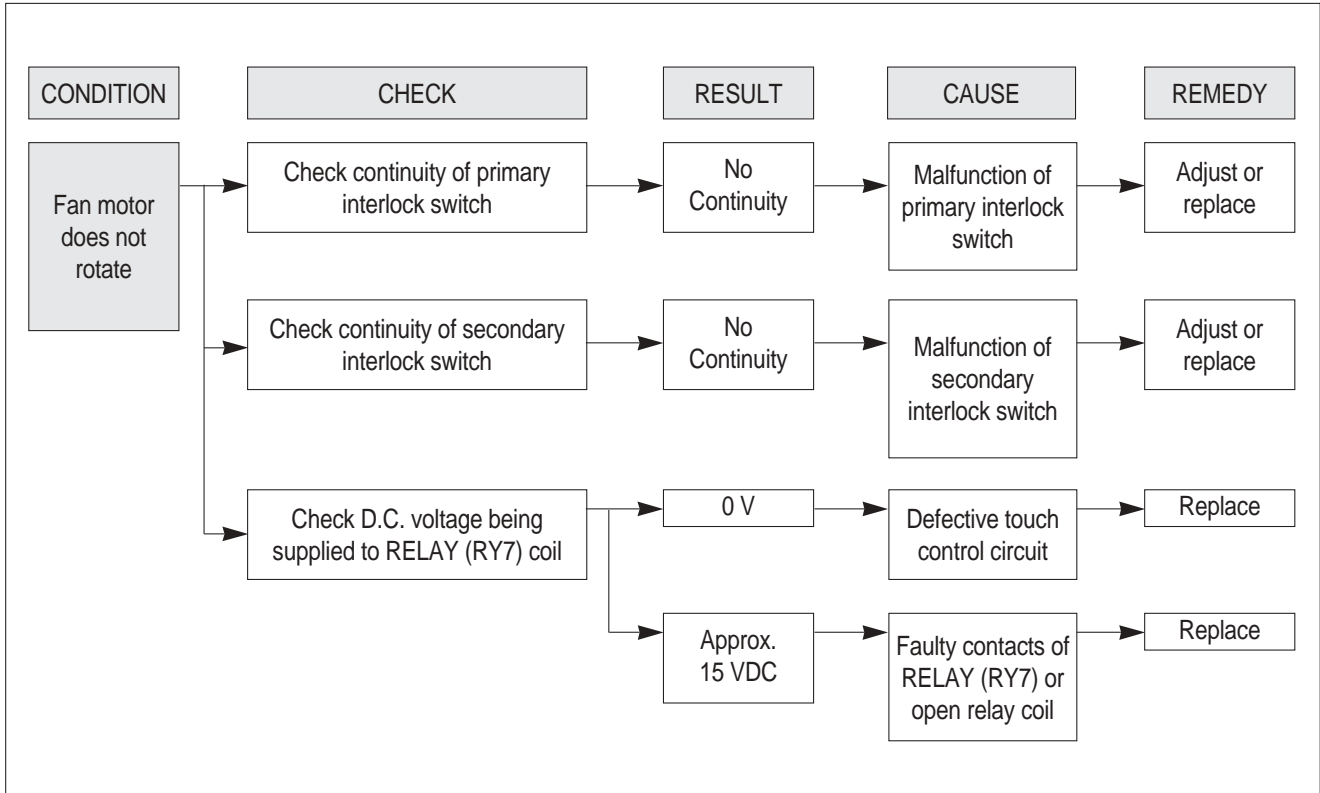




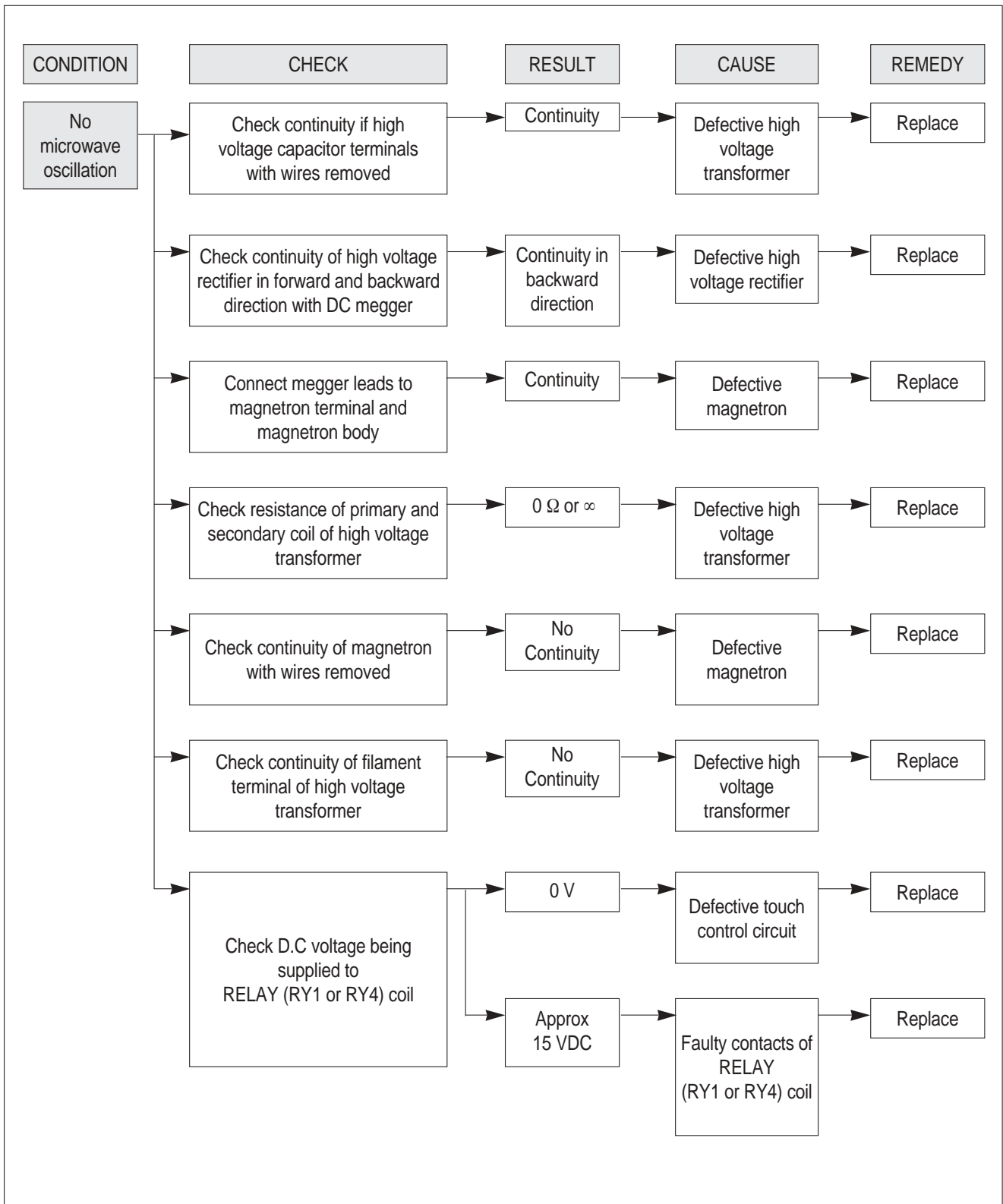
NOTE
 All these switches must be replaced at the same time, please refer to "Interlock Mechanism And Adjustment".

(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.



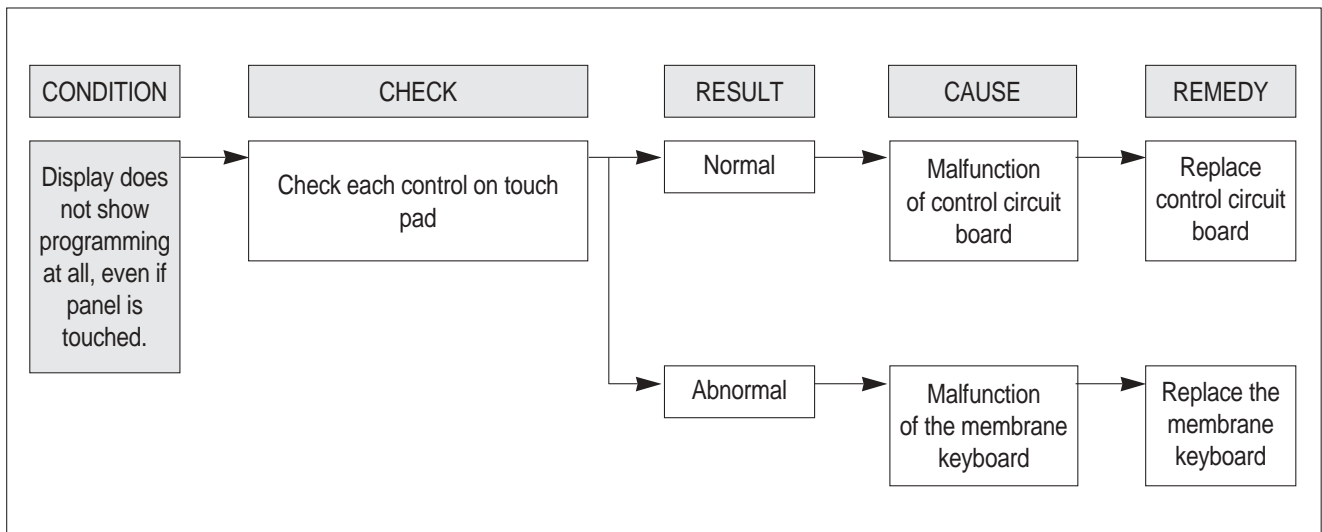
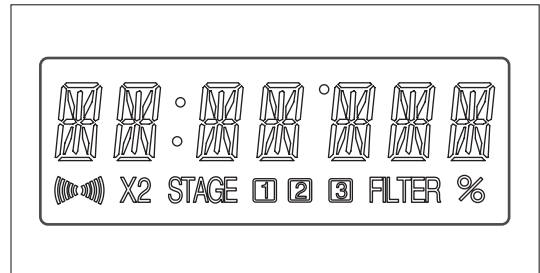


(TROUBLE 3) No microwave oscillation even though fan motor rotates.



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

1. Incomplete segments,
 - 1) Segments missing.
 - 2) Partial segments missing.
 - 3) Digit flickering other than normal display slight flickering.
2. The display does not show the contents correctly when you touch a pad.
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.



NOTE
 Before following the particular steps listed above in the troubleshooting guide for the touch pad, failure, please check for the continuity of each wire-harness between the touch pad 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±5cc of potable water.
- The water is contained in a cylindrical borosilicate glass vessel having a maximum material thickness of 3mm and an outside diameter of approximately 190mm.
- 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±2°C (50±3.6°F).

If 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.

It is measured immediately before the water is added to the vessel.

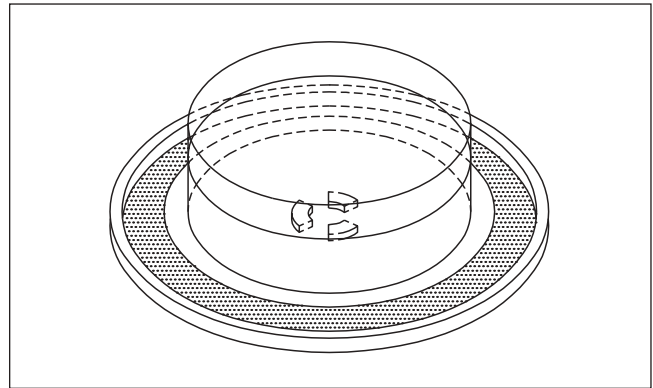
After addition of the water to the vessel, the load is immediately placed on the center of the shelf, which is in the lowest normal position.

- 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 final temperature.
- t is the heating time.

The power measured be B (Refer to SPECIFICATIONS) W±10.0 %.



CAUTION :

- Water load should be measured exactly to 1 liter.
- Input power voltage should be exactly specified voltage (Refer to SPECIFICATIONS).
- Ambient temperature should be 20±2°C(68±3.6°F)

- Heating time for power output:

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

A(second)	38	35	32	30	28	26	25	23		
B(W)	1100	1200	1300	1400	1500	1600	1700	1800		

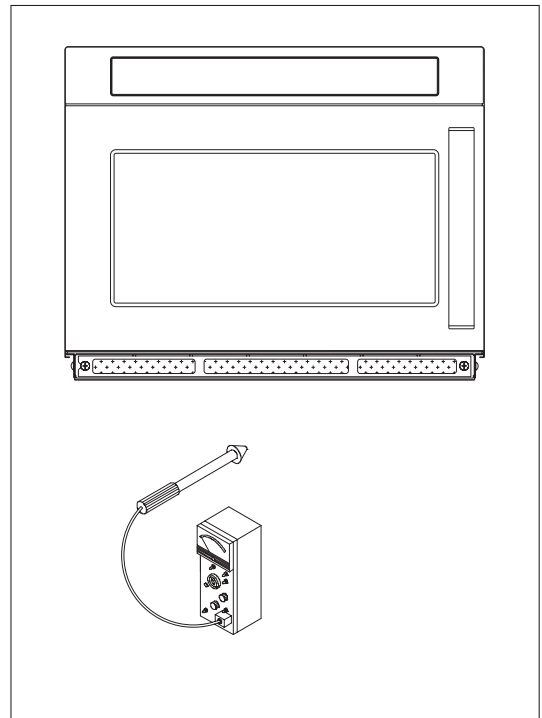
2. MICROWAVE RADIATION TEST

CAUTION :

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

PROCEDURES

1. Prepare Microwave Energy Survey Meter, 600cc glass beaker, and glass thermometer 100°C(212°F).
2. Pour 275cc±15cc of tap water initially at 20±5°C(68±9°F) in the 600cc glass beaker with an inside diameter of approx. 85mm(3.5in.).
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 4mW/cm².
 - 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.



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. $100\Omega \pm 10\%$ (110 $\Omega \pm 10\%$: KOM-9F2CTS)
 - Filament winding.....Approx. 0Ω
 - Primary winding.....Approx. 15Ω

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 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

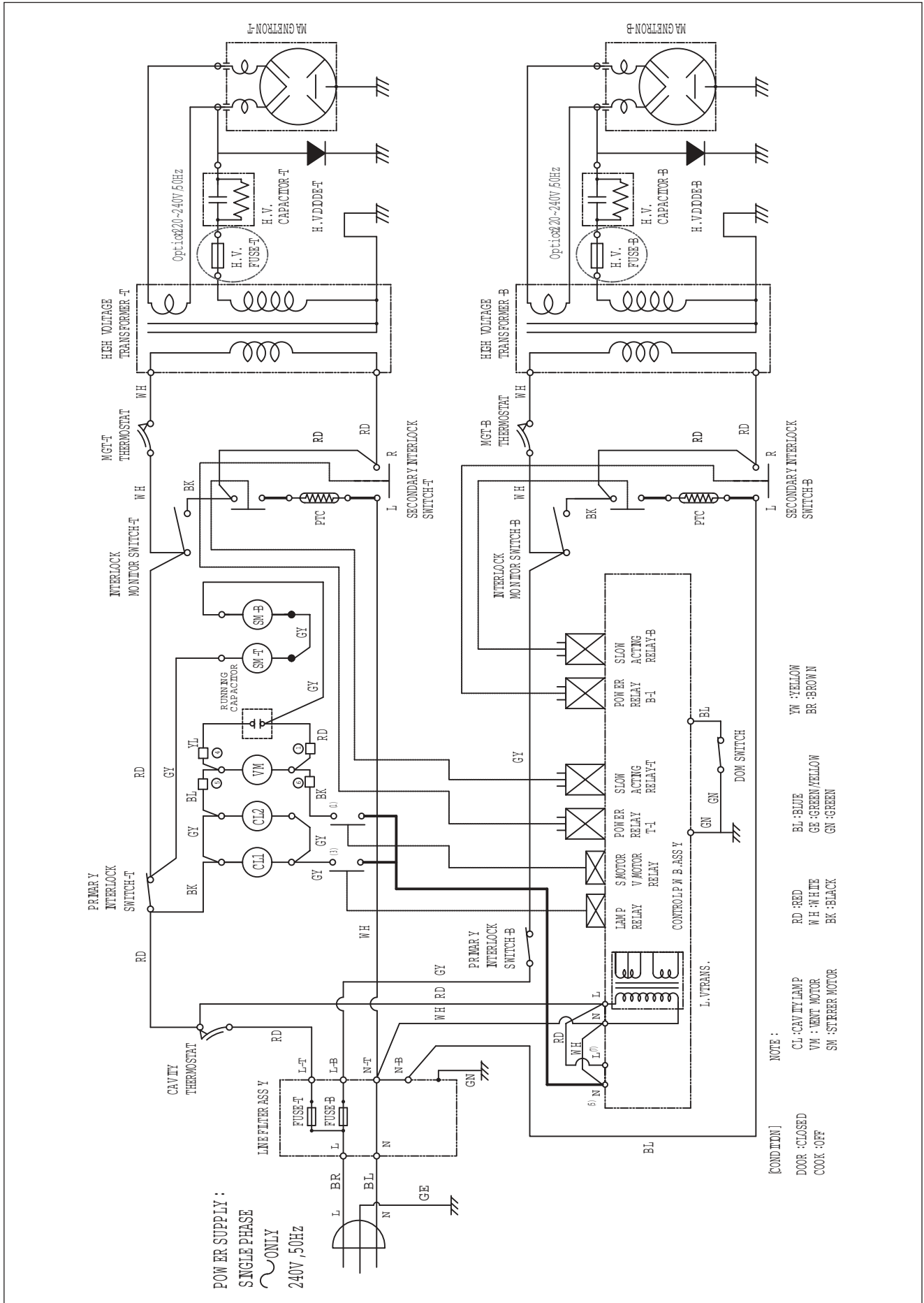
If the fuse in the primary and monitor switch circuit is blown when the door is opened, check the primary and monitor switch before replacing the blown fuse.

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.

6. Interlock switches

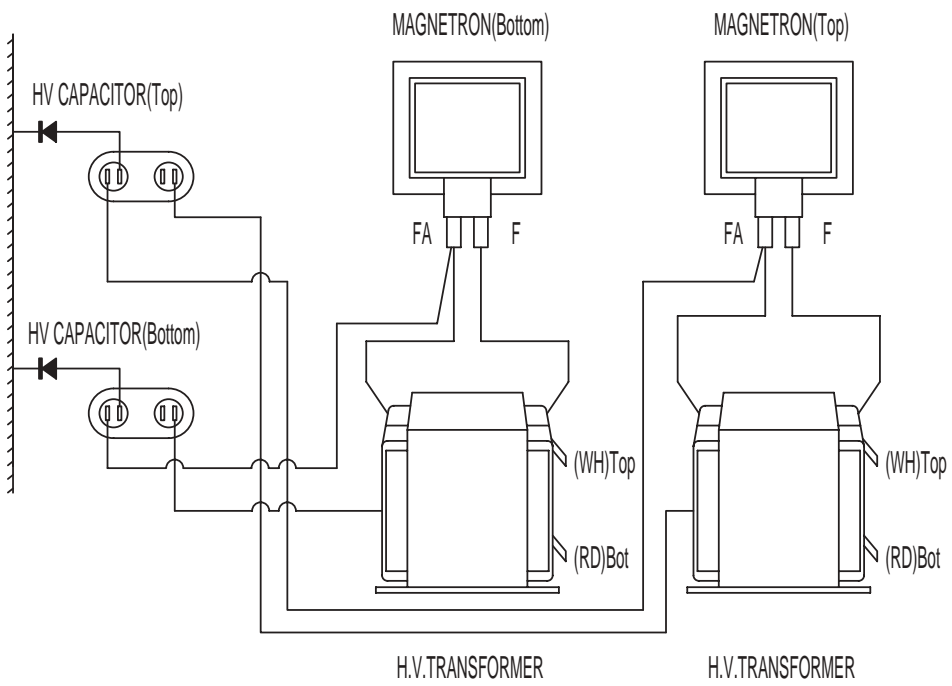
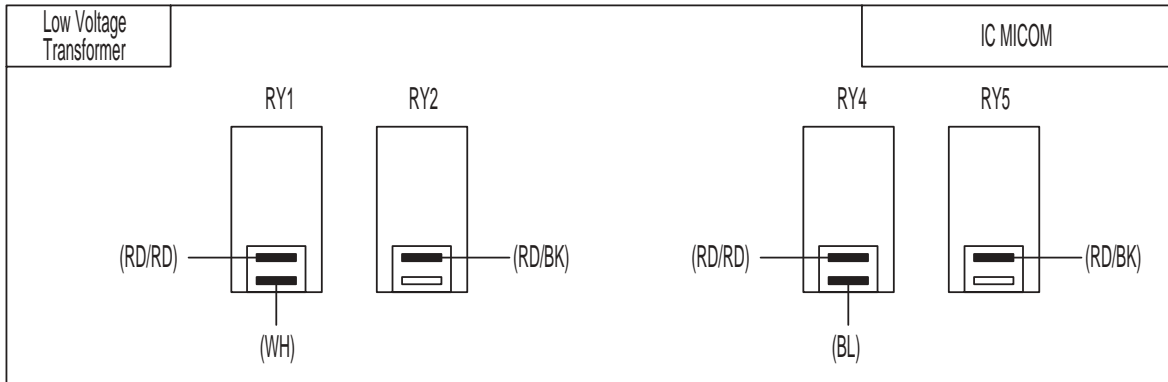
- (1) You can test continuity of safety interlock and monitor switch by using ohmmeter.
- (2) The switch operation is checked by zero/unlimited. The meter should indicate zero resistance.
- (3) The sequence of check is interlock monitor switch, primary and secondary interlock switches check.

WIRING DIAGRAM



NOTE : When replacing, check the lead wire color as shown.
 Colors shown by () indicate colors of lead wire connector housing.

(FRONT SIDE)



PRINTED CIRCUIT BOARD

1. CIRCUIT CHECK PROCEDURE

1. Low voltage transformer check

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

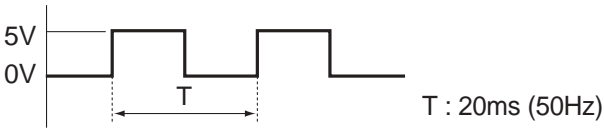

Measuring condition: Input voltage: 240V / Frequency: 50Hz

Terminal Voltage	LOAD	NO LOAD
6-7, 7-8	DC 12V	AC 25.8V
9-10	AC 2.5V	AC 3.0V

NOTE

1. Refer to Circuit Diagram.
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

NO	CHECK POINT	REMARK
1	IC1 PIN 63, 64	5VDC
2	IC1 PIN 38	
3	IC 1 PIN 33 OR PIN 34	

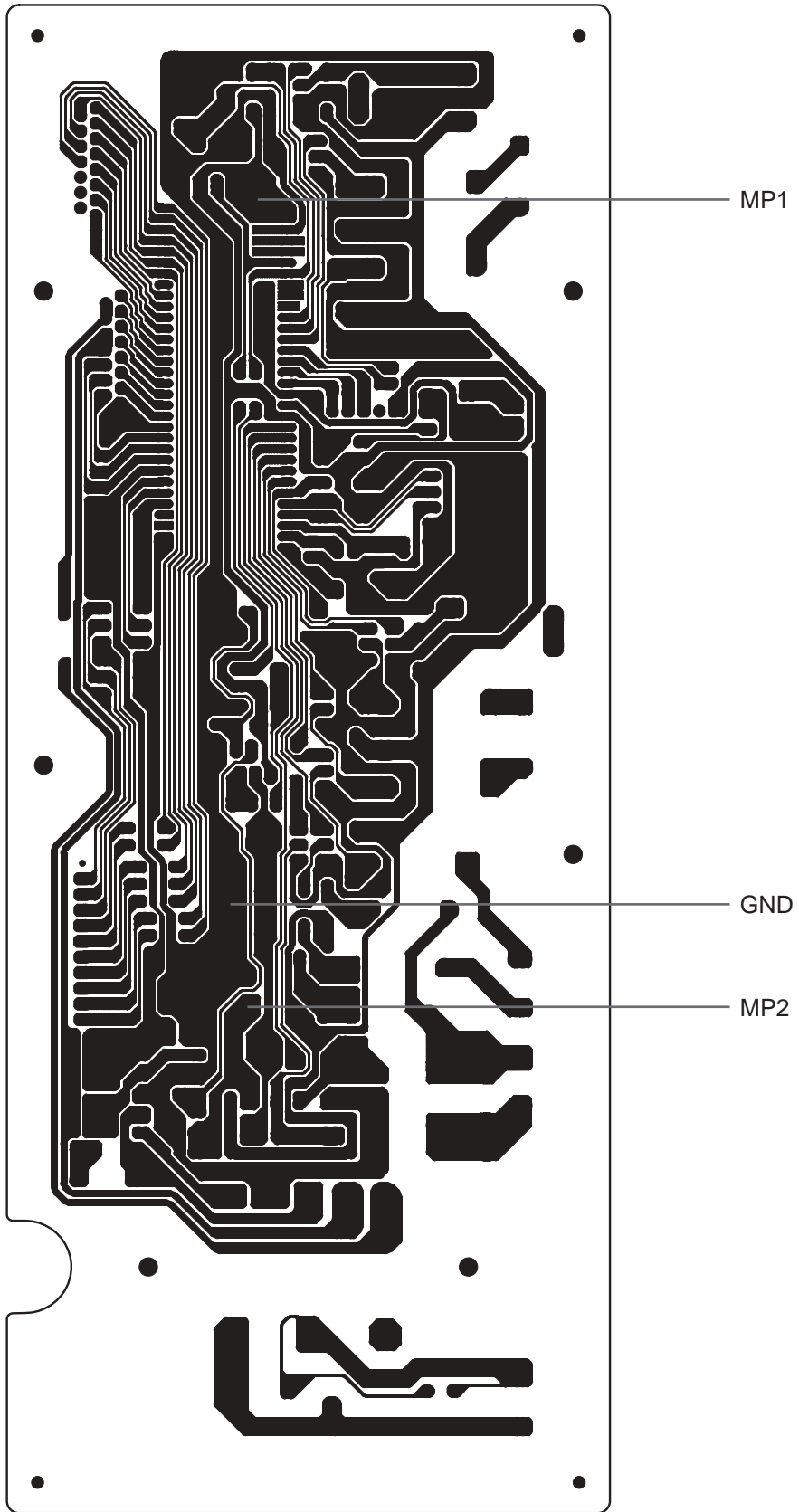
- Key check point

NO	MEASURE POINT	WAVE FORM	REMEDY	REMARK
1	MP1	DC 5V \pm 0.25V	Replace Q8,ZD1,EC2,R21,C2	NO LOAD
2	MP2	DC 12V \pm 2.0V	Replace D21,D22,EC3,EC4,R26,C8	NO LOAD

- Check method

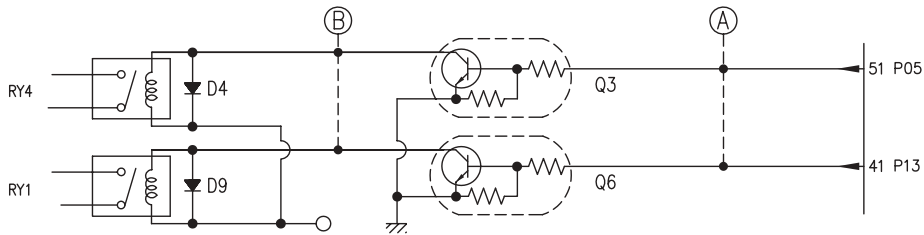
NOTE

Each measure point must be measured with GND points.



3. When there is no microwave oscillation

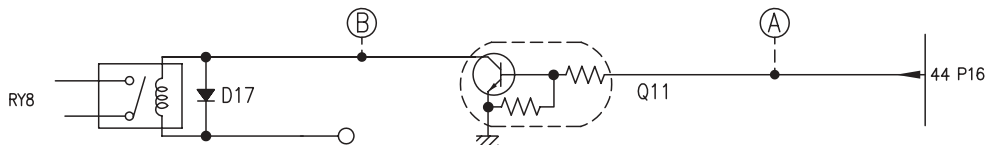
Cause : **RELAY 1** or **RELAY 4** does not operate.



STATE	POINT	A	B
RELAY 1 ON		5VDC	GND
RELAY 1 OFF		GND	12VDC
RELAY 4 ON		5VDC	GND
RELAY 4 OFF		GND	12VDC

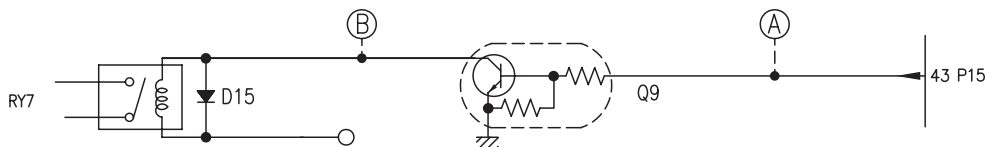
2) When touching **START** pad, oven lamp or fan motor does not turn on but cook indicator in display comes on.

- Oven lamp does not turn on
- Cause : **RELAY 8** does not operate.



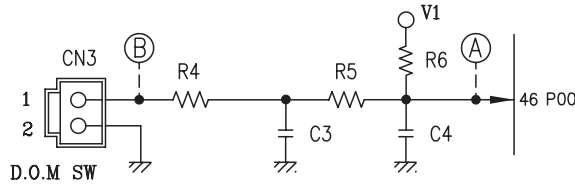
STATE	POINT	A	B
RELAY 8 ON		5VDC	GND
RELAY 8 OFF		GND	12VDC

- Fan motor does not rotate
- Cause : **RELAY 7** does not operate.



STATE	POINT	A	B
RELAY 7 ON		5VDC	GND
RELAY 7 OFF		GND	12VDC

4. When the door is opened during operation the countdown timer does not stop.

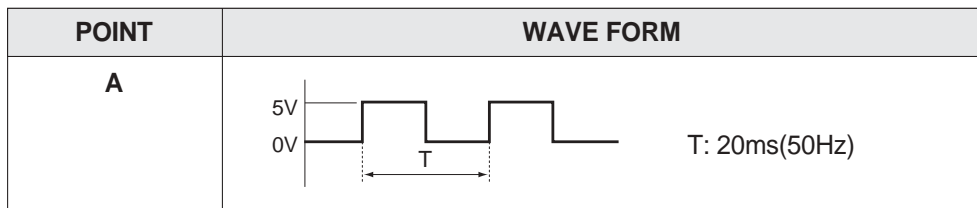


STATE	POINT	A	B
DOOR OPEN		5VDC	OPEN
DOOR CLOSED		GND	CLOSE

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

5. When the digital clock does not operate properly.

→ refer to Circuit Diagram



* If clock does not keep exact time, you must check resistor R20, R29, transistor Q7.

6. Retrieving Service Information

To retrieve the oven usage history, press and hold 3 pad for 5 seconds when the door is opened. The display will show "SERVICE" message, then you can retrieve the information by pressing a number pad as described below.

PAD	NAME	DECRPTION	UNIT
1	TUBE HOUR	Accumulated magnetron turn on hour	1 /1 hour
2	TUBE CYCLE	Accumulated magnetron turn on/off times	1 /once
3	DOOR CYCLE	Accumulated door open/closed times	1 /10 times

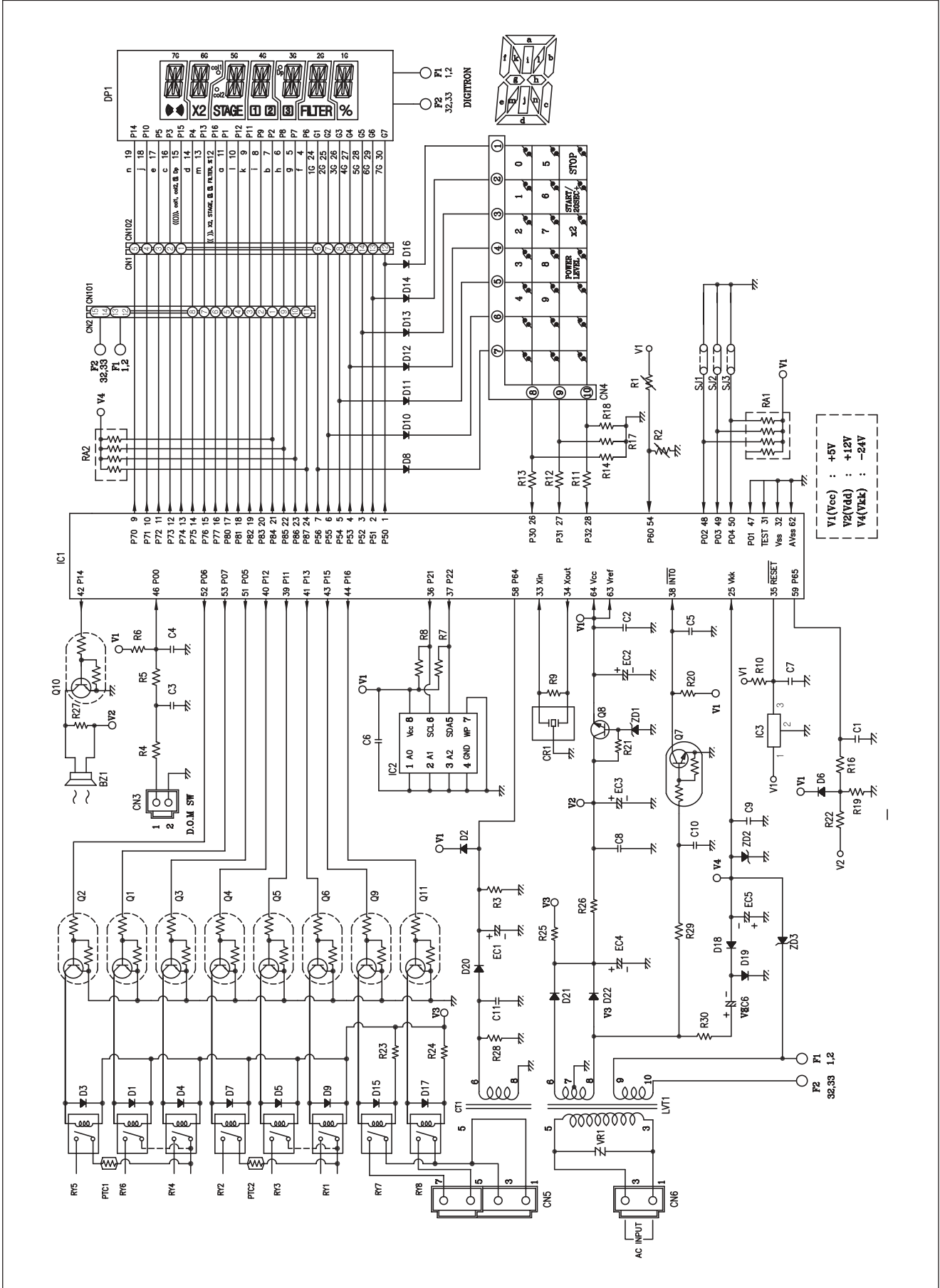
STEP	DISPLAY	DESCRIPTION
1	(BLANK)	Open Door
2	"SERVICE"	Press and hold 3 Pad for 5 seconds
3	"1024"	Press 1 Pad for Tube Hours (1,024 shown)
	"65536"	Press 2 Pad for Tube Cycles (65,556 shown)
	"131072"	Press 3 Pad for Door Cycles (131,072 shown)
4	"HELLO"	Close Door

7. Initializing Service Information

To initialize the oven usage history, press and hold 3 pad for 3 seconds when the door is opened. The display will show "SERVICE" message, then you can select the service information to be initialized by pressing a number pad as described below. The service information is initialized when you press the 0 pad. The display will show "SERVICE" message.

PAD	DISPLAY	DESCRIPTION
6	CLEAR-1	Initialize TUBE HOUR
7	CLEAR-2	Initialize TUBE CYCLE
8	CLEAR-3	Initialize DOOR CYCLE

2. P.C.B. CIRCUIT DIAGRAM



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(<http://svc.dwe.co.kr>).

3. P.C.B.LOCATION NO.

NO	NAME	SYMBOL	PART CODE	SPECIFICATION	Q'TY
1	BUZZER	BZ1	3515600100	BM-20K (BUJEON)	1
2	C CERA	C2~6,8~10	CCZF1H104Z	HIKF 50V 0.1MF Z AXIAL	8
3	C CERA	C7	CCZB1H102K	50V B 1000PF K (AXIAL)	1
4	C ELECTRO	EC2	CEXE1H100A	50V RS 10MF (5X11) TP	1
5	C ELECTRO	EC3	CEXF1V221V	35V RSS 220MF (10X12.5)TP	1
6	C ELECTRO	EC4	CEXF1V102V	35V RSS 1000MF (13X25) TP	1
7	C ELECTRO	EC5	CEXF1H101V	50V RSS 100MF (8X11.5) TP	1
8	C ELECTRO	EC6	CEXF1H221V	50V RSS 220MF (10X16) TP	1
9	CONN FILM	CN4	441M367150	FCZ 254-10(YEON HO)	1
10	CONN WAFER	CN1,2	4CW215SBD0	HLEM15S-1	2
11	CONN WAFER	CN3	3519150520	YW396-02V(YEONHO)	1
12	CONN WAFER	CN5	3519150540	YW396-07AV(YEONHO)	1
13	CONN WAFER	CN6	3519150500	YW396-03AV(YEONHO)	1
14	DIODE	D18,19,21,22	DZN4004A--	KN4004A AUTO 52MM	4
15	DIODE	D3,4,7~17	DZN4148---	1N4148 AUTO 52MM	13
16	DIODE ZENER	ZD1,3	DZUZ5R6BSB	UZ-5.6BSB(5.46-5.70V)	2
17	DIODE ZENER	ZD2	DZUZ24BSB-	UZ-24BSB(22.75-23.73V)	1
18	IC EEPROM	IC2	14HN24C16L	CAT24C16LI	1
19	IC MICOM	IC1	13GL87P14N	TMP87PM14N	1
20	IC RESET	IC3	1K1A7033AP	KIA7033AP	1
21	PCB MAIN	BOARD	3514335100	M352	1
22	R ARRAY	RA1,2	RA-85X104J	RGLD4X104J (MURATA)	2
23	R CARBON FILM	R14,17,18	RD-AZ104J-	1/6 100K OHM J	3
24	R CARBON FILM	R2,4,5,10~13,21,27	RD-AZ102J-	1/6 1K OHM J	9
25	R CARBON FILM	R23,24	RD-4Z510J-	1/4 51 OHM J	2
26	R CARBON FILM	R25	RD-4Z689J-	1/4 6.8 OHM J	1
27	R CARBON FILM	R26	RD-2Z270JS	1/2 27 OHM J SMALL	1
28	R CARBON FILM	R30	RD-2Z280JS	1/2 82 OHM J SMALL	1
29	R CARBON FILM	R29	RD-AZ473J-	1/6 47K OHM J	1
30	R CARBON FILM	R6~8,20	RD-AZ103J-	1/6 10K OHM J	4
31	R CARBON FILM	R9	RD-AZ105J-	1/6 1M OHM J	1
32	RESONATOR CERA	CR1	5P4R00MTS-	CRT 4.00MS	1
33	SW RELAY	RY1,2,4,5	5SC0101121	G5G-1A 1C 1P DC12V	4
34	SW RELAY	RY7,8	5SC0101404	OJ-SS-112LM 1C 1P	2
35	THERMISTOR PTC	PTC1,2	DP1390MK10	PP1AR390MK10	2
36	TR	Q2~4,6,7,9~11	TZRC106M--	KRC106M(AUTO)	8
37	TR	Q8	TZTC3198GR	KTC3198GR (1815GR)	1
38	TRANS POWER	LVT1	5EPV034010	DMR-9F0FS	1
39	VARISTOR	VR1	DSVC471D14	SVC471D14A (BULK)	1
40	WIRE COPPER	J8	85801052GY	1/0.52 TIN COATING (10.0mm)	1
41	WIRE COPPER	J4,5	85801052GY	1/0.52 TIN COATING (12.5mm)	2
42	WIRE COPPER	J1~3,6,7	85801052GY	1/0.52 TIN COATING (7.5mm)	5

EXPLODED VIEW AND PARTS LIST

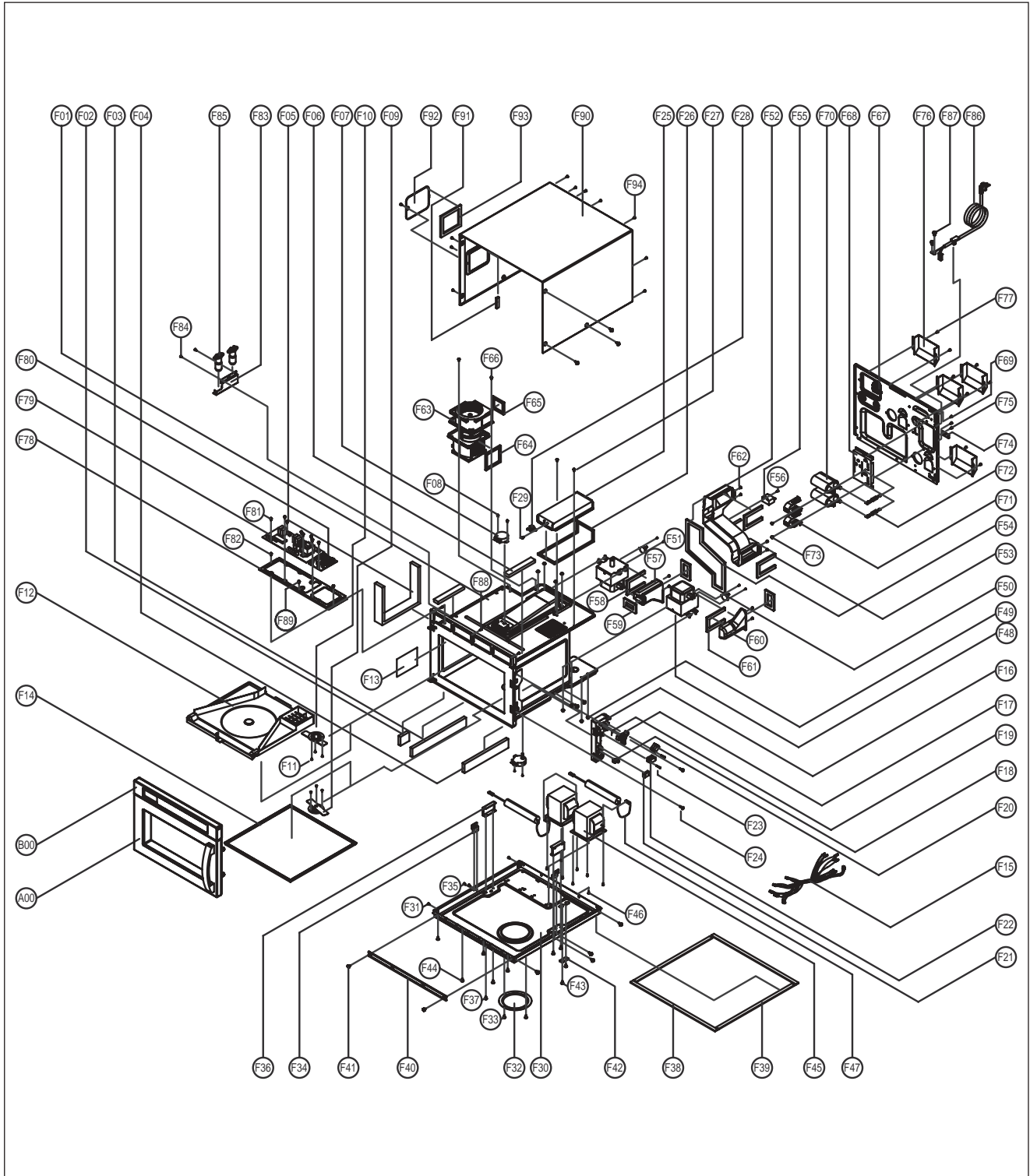
1. DOOR ASSEMBLY

Refer to Disassembly and assembly.

2. CONTROL PANEL ASSEMBLY

Refer to Disassembly and assembly.

3. TOTAL ASSEMBLY



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REF. NO	PART CODE	PART NAME	DESCRIPTION	Q'TY	REMARK
A00	3511732400	DOOR AS	KOM-9F2CTS	1	
B00	PKCPSWZYD0	CONTROL-PANEL AS	KOM-9F2CTS	1	
F01	3516122300	CAVITY AS	KOM-9F0CTS	1	
F02	3517318390	FOAM	PU 35TX15X50 U-L	1	
F03	3517318370	FOAM	PU 35TX15X245 U-L	1	
F04	3517318380	FOAM	PU 35TX15X200 U-R	1	
F05	3517318540	FOAM	PU 35TX15X470 LAMP	1	
F06	3517318550	FOAM	PU 10TX20X120 TOP	2	
F07	3966830830	MOTOR SYNCRO	120V 50/60HZ SM16F FY26T1FY	2	
F08	7121400611	SCREW TAPPING	T2S PAN 4X6 MFZN	4	
F09	3517101720	STIRRER *U AS	KOM-9F0CTS	1	
F10	3517101730	STIRRER *T AS	KOM-9F0CTS	1	
F11	3512001100	FIXTURE SUPPORTER STIRRER	PTFE	6	
F12	3511416110	COVER STIRRER	PP GP3300	1	
F13	3511416120	COVER LAMP *I	PE T0.1	1	
F14	3517213510	TRAY AS	KOM-9F0CTS TRAY SEALING	1	
F15	3512785200	HARNESS MAIN	KOM-9F0CTS	1	
F16	3513822700	LOCK	PBT EE-2306F (V0)	1	
F17	3513703900	LEVER LOCK *T	POM	1	
F18	3513703910	LEVER LOCK *U	POM	1	
F19	3515103700	SPRING LEVER	PW1 0.6 DIA.	1	
F20	5S766G10G1	SW MICRO	SZM-V16-FD-93 W (400G)	2	
F21	4415A66600	SW MICRO	SZM-V16-FA-62	2	
F22	4415A17352	SW MICRO	SZM-V16-FA-63	1	
F23	7121301513	SCREW TAPPING	T2S PAN 3X30 MFZN	2	
F24	7S322X40B1	SCREW SPECIAL	T2 TRS 4X12 SE MFZN	2	
F25	3512531220	GUIDE AIR OUTLET *T	SBHG T0.5	1	
F26	3517318530	FOAM	PU 5TX10X760	1	
F27	7S312X40A1	SCREW SPECIAL	T1 TRS 4X10 SE MFZN	2	
F28	3518905900	THERMOSTAT	OFF:75 ON:65 V #187	1	
F29	7121400611	SCREW TAPPING	T2S PAN 4X6 MFZN	1	
F30	3510319910	BASE	SBHG T1.0	1	
F31	7S312X40A1	SCREW SPECIAL	T1 TRS 4X10 SE MFZN	4	
F32	3511416100	COVER MOTOR SYNCRO	STS430 T0.7	1	
F33	7S312X40A1	SCREW SPECIAL	T1 TRS 4X10 SE MFZN	2	
F34	3510613210	BRACKET BASE	SBHG T1.0	2	
F35	7S312X40A1	SCREW SPECIAL	T1 TRS 4X10 SE MFZN	4	
F36	3515310120	SUPPORTER CAVITY	SBHG T1.0	2	
F37	7S312X40A1	SCREW SPECIAL	T1 TRS 4X10 SE MFZN	4	
F38	3512102800	FOOT	NR T12*2*442MM	2	
F39	3512102810	FOOT *S	NR T12*2*468MM	2	
F40	3512400800	GRILLE AIR AS	KOM-9F0CTS	1	
F41	7173401216	SCREW TAPTITE	TT3 GRILLE 4X12 MFZN	2	
F42	3515310140	SUPPORTER STACK	PO T2.0 COATING	1	
F43	7S312X40A1	SCREW SPECIAL	T1 TRS 4X10 SE MFZN	2	
F44	7S312X40A1	SCREW SPECIAL	T1 TRS 4X10 SE MFZN	8	
F45	3518126400	TRANS HV	R9S59A DS31	2	KOM-9F2CTS(1850W)
	3518126410	TRANS HV	R9S57A DS30	2	KOM-9F2CK(1500W)
F46	3516003700	SPECIAL SCREW	TT3 HEX 4X8 FLG MFZN	8	

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REF. NO	PART CODE	PART NAME	DESCRIPTION	Q'TY	REMARK
F47	3518704500	FUSE HV	5KV 800MA *THV-060T HD-CMO	2	KOM-9F2CTS(1850W)
	3518704510	FUSE HV	5KV 700MA *THV-060T HD-CMO	2	KOM-9F2CKS(1500W)
F48	3518003810	MAGNETRON	2M248H(DW)-B	2	
F49	7S627W50X1	NUT HEX	NUT FLANGE M5X0.8P MFZN	8	
F50	3518902200	THERMOSTAT	OFF:130 ON:115 H NT-101	2	
F51	7121300611	SCREW TAPPING	T2S PAN 3X6 MFZN	4	
F52	3512531230	GUIDE AIR INLET	PBT EE-2306F (V0)	1	
F53	3517318500	FOAM	PU 5TX10X260	2	
F54	3517318520	FOAM	PU 5TX10X850	1	
F55	3518304100	CAPACITOR RUNNING	400VAC 1.5UF	1	
F56	7122401211	SCREW TAPPING	T2S TRS 4*12 MFZN	1	
F57	3512531240	GUIDE AIR OUTLET *L	PP GP2300	1	
F58	3517318500	FOAM	PU 5TX10X260	2	
F59	3517318510	FOAM	PU 5TX10X180	1	
F60	3512531250	GUIDE AIR OUTLET *R	PP GP2300	1	
F61	3517318500	FOAM	PU 5TX10X260	2	
F62	7S312X40A1	SCREW SPECIAL	T1 TRS 4X10 SE MFZN	8	
F63	3964822100	MOTOR VENTILATION	OBB-2201Q2	1	
F64	3517318580	FOAM	PU 5TX10X300	1	
F65	3517318590	FOAM	PU 5TX10X220	1	
F66	7S312X40A1	SCREW SPECIAL	T1 TRS 4X10 SE MFZN	2	
F67	3516509000	REAR-PLATE	SBHG T0.5	1	
F68	3510613270	BRACKET CAPACITOR	SBHG T0.5	1	
F69	7S312X40A1	SCREW SPECIAL	T1 TRS 4X10 SE MFZN	2	
F70	3518303620	CAPACITOR HV	2300VAC 1.05UF #187 P CLASS	2	
F71	3513001920	HOLDER HV CAPACITOR	SECC T0.8	2	
F72	3518401410	DIODE HV AS	HV03-12 400MA 12000V #187	2	
F73	7272400811	SCREW TAPTITE	TT3 TRS 4X8 MFZN	2	
F74	3515310140	SUPPORTER STACK	PO T2.0 COATING	1	
F75	7S312X40A1	SCREW SPECIAL	T1 TRS 4X10 SE MFZN	13	
F76	3511416200	COVER EXHAUST	SBHG T0.5	4	
F77	7272400811	SCREW TAPTITE	TT3 TRS 4X8 MFZN	8	
F78	3510613250	BRACKET PCB	SBHG T0.5	1	
F79	PKMPMSZZU0	PCB MAIN MANUAL AS	KOM-9FOCTS	1	
F80	3518608900	NOISE-FILTER	DWLF-M31 SS	1	
F81	7S312X40A1	SCREW SPECIAL	T1 TRS 4X10 SE MFZN	8	
F82	7121400611	SCREW TAPPING	T2S PAN 4X6 MFZN	2	
F83	3510613260	BRACKET LAMP	SBHG T0.5	1	
F84	7S312X40A1	SCREW SPECIAL	T1 TRS 4X10 SE MFZN	2	
F85	3513603700	LAMP AS	KOM-9FOCTS	2	
F86	35113VJY0X	CORD POWER AS	3X1.5 290X290 300-RTML RUBBER	1	
F87	7S312X40A1	SCREW SPECIAL	T1 TRS 4X10 SE MFZN	2	
F88	7122401211	SCREW TAPPING	T2S TRS 4*12 MFZN	3	
F89	7S312X40A1	SCREW SPECIAL	T1 TRS 4X10 SE MFZN	1	
F90	3510811500	CABINET	STS430 T0.7 #4	1	
F91	3517318560	FOAM	PU 5TX10X40	1	
F92	3511405510	COVER LAMP	STS430 T0.7 #4	1	
F93	3517318570	FOAM	PU 5TX10X400	1	
F94	7S312X40A1	SCREW SPECIAL	T1 TRS 4X10 SE MFZN	14	



DAEWOO ELECTRONICS CORP.

1-2, Jeo-dong 1(il)-ga, Jung-gu, Seoul, Korea
C.P.O. BOX 8003 SEOUL, KOREA
TELEX: DWELEC K28177-8
CABLE: "DAEWOOELEC"

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6번지 이룸빌딩 4층

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VISION 담당 방문수

TEL: 730-0660 FAX: 730-3788