

S/M No. : C995T0S110

Service Manual

Microwave Oven

Model: KOC-995T0S
KOC-995T0S11

DAEWOO



DAEWOO ELECTRONICS CO., LTD.

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.
 - (1) inform the manufacturer, importer or assembler,
 - (2) repair the unit at no cost to the owner,
 - (3) attempt to ascertain the cause of the excessive leakage,
 - (4) 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 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

This oven is designed for counter-top use only.

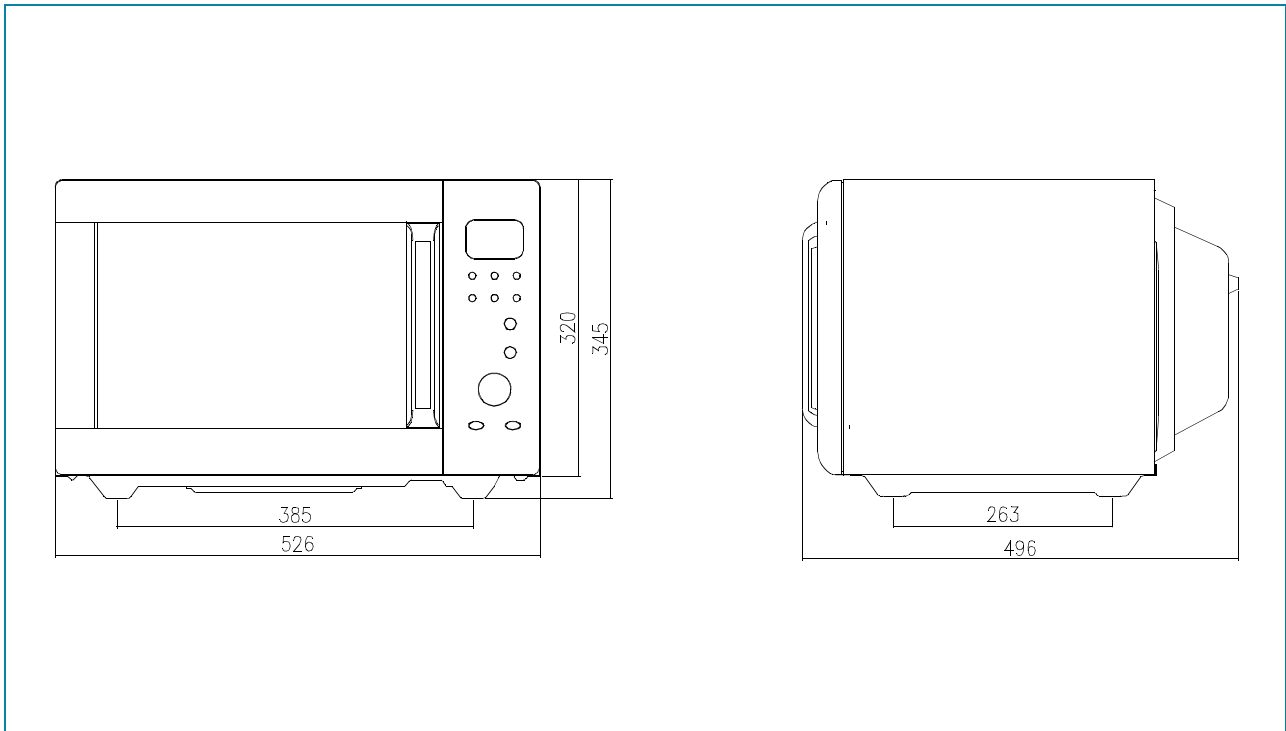
SPECIFICATIONS

MODEL		KOC-995T0S	KOC-995T0S11
POWER SUPPLY		230V~50Hz	230V~50Hz
POWER CONSUMPTION	MICROWAVE	1,550W	1,550W
	GRILL	1,400W	1,400W
	CONVECTION	1,450W (Temporary Maximum Power Consumption : 2,800W)	
	COMBINATION	2,950W (Simultaneous)	1,550W (Sequential)
MICROWAVE ENERGY OUTPUT		1,000W(IEC705)	1,000W(IEC705)
MICROWAVE FREQUENCY		2,450MHz	2,450MHz
OUTSIDE DIMENSIONS (W X H X D)		526 x 345 x 496 mm (20.7 x 13.6 x 19.1 in.)	
CAVITY DIMENSIONS (W X H X D)		335 x 260 x 335 mm (13.2 x 10.2 x 13.2 in.)	
NET WEIGHT		APPROX. 23.0 Kg (50.8 lbs.)	
TIMER		60 minutes	
FUNCTION SELECTIONS		MICROWAVE/GRILL/CONVECTION/COMBI/ ROTISSERIE(option)	
POWER SELECTIONS		10 LEVELS	
CAVITY VOLUME		1.0 Cu.Ft.	

* SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

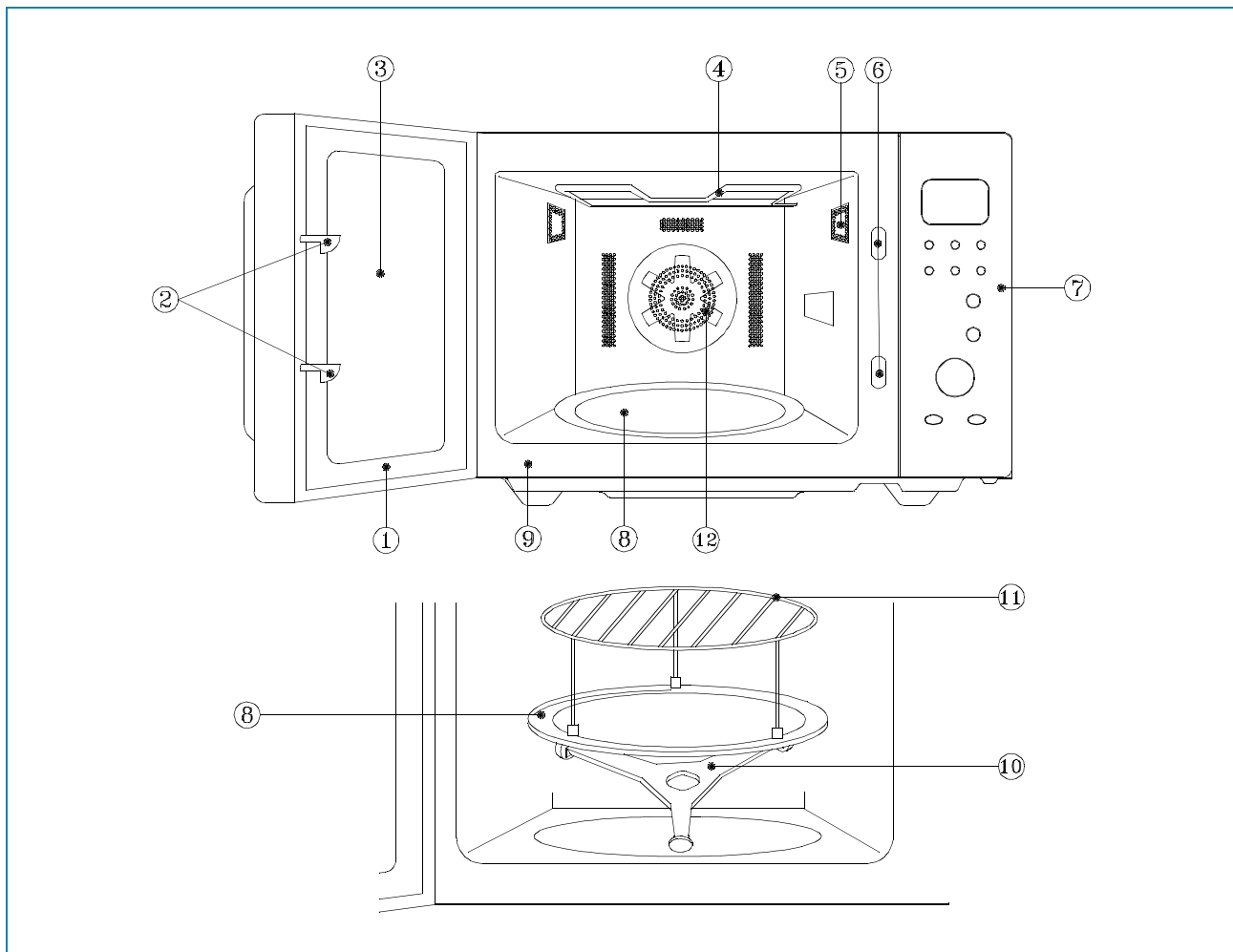
EXTERNAL VIEW

1. OUTER DIMENSION



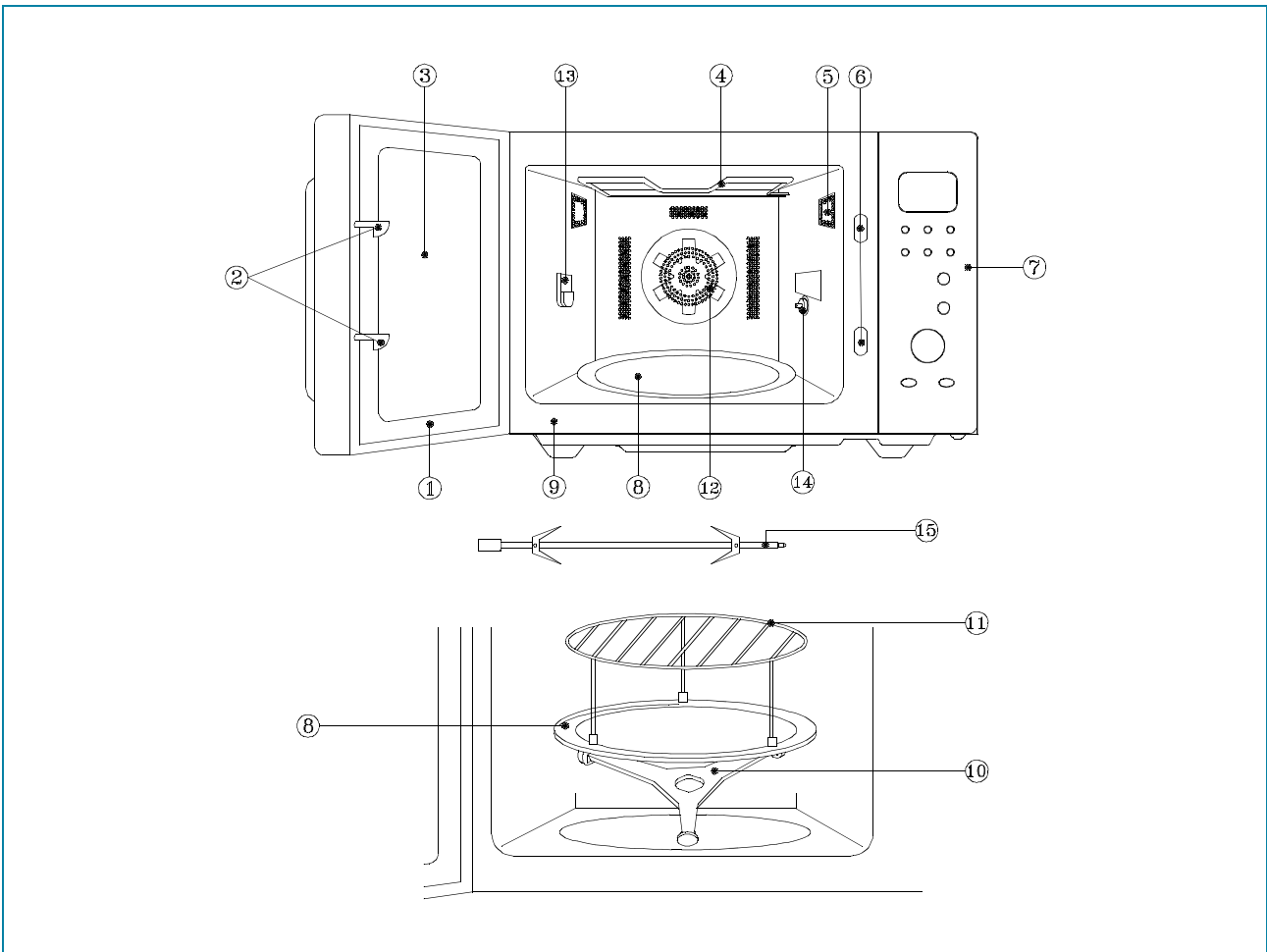
2. FEATURE DIAGRAM

2-1. KOC-995T0S



1. **Door seal** - Door seal maintains the microwave energy within the oven cavity and prevents microwave leakage.
2. **Door hook** - When the door is closed, it will automatically shut. If the door is opened while the oven is operating, the magnetron will immediately stop operating.
3. **Door viewing screen** - Allows viewing of food. The screen is designed so that light can pass through, but not the microwave.
4. **Top heater** - Turns on when convection, grill and combi cooking is selected.
5. **Oven lamp** - Automatically turns on during oven operating.
6. **Safety interlock system**
7. **Control panel**
8. **Turntable tray** - Rotates during cooking and ensure even distribution of Microwaves.
It can also be used as a cooking utensil.
9. **Oven front plate**
10. **Rotating base** - This fits over the shaft in the center of the ovens cavity floor. This is to remain in the oven for all cooking. It should only be removed for cleaning.
11. **Metal rack**
12. **Convection outlet & Fan**

2-2. KOC-995T0S11



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12. **Convection outlet & Fan**
13. **Guide Rotary**
14. **Motor Synchro**
15. **Utensil Bar**

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 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 13amperes, 230 Volts, 50 Hz.

Power supply cord is about 1.2 meters long.

The voltage used must be the same as specified on this oven. Using a higher voltage may result in a fire or other accident causing oven damage. Using low voltage will cause slow cooking. We are not responsible for damage resulting from use of this oven with a voltage of ampere fuse other than those specified.

This appliance is supplied with cable of special type, which, if damaged, must be repaired with cable of same type.

Such a cable can be purchased from DAEWOO and must be installed by a Qualified Person.

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

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

If any of the above 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 the oven to become room temperature before operating.

EARTHING INSTRUCTIONS

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

WARNING

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

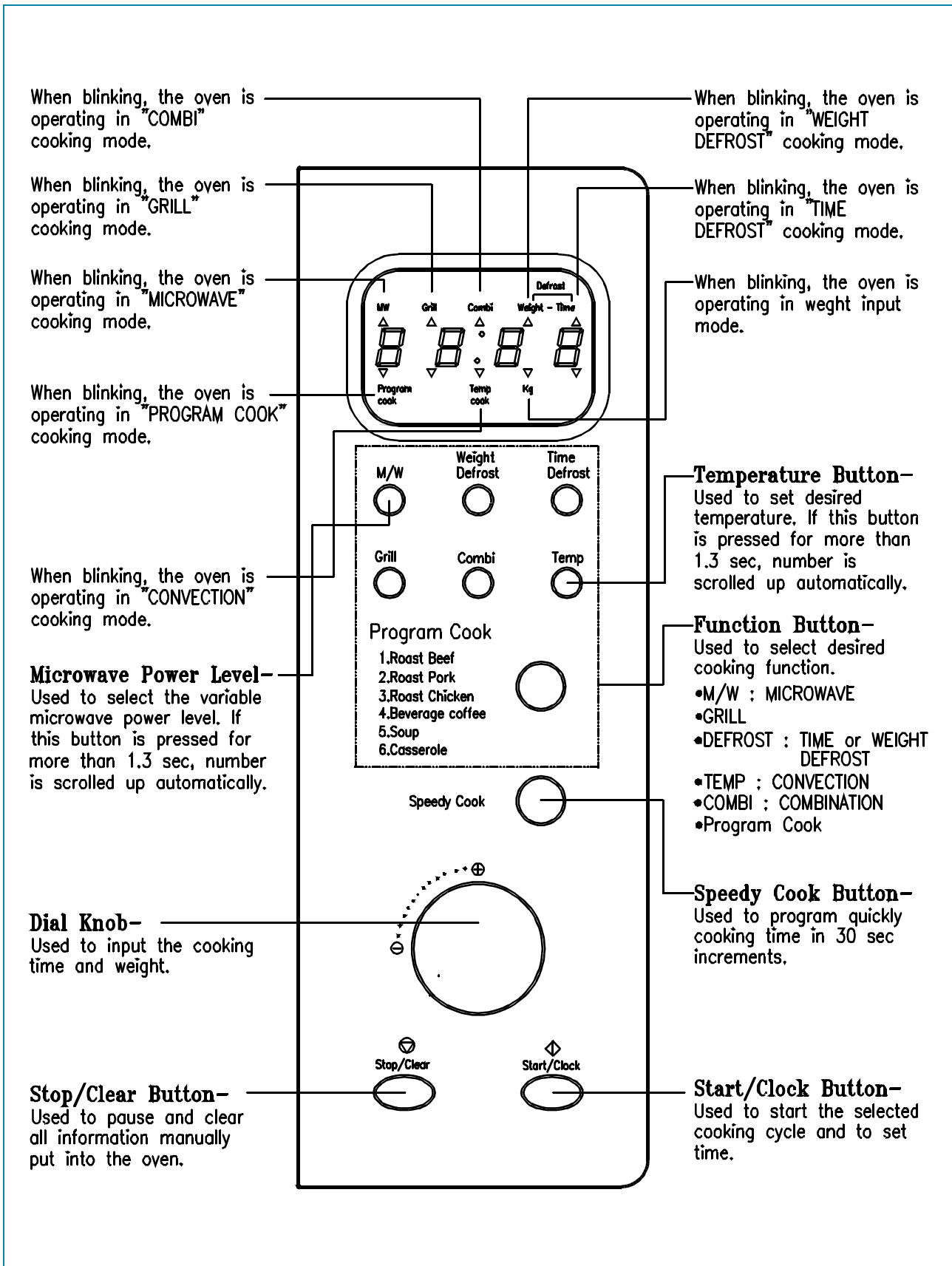
Consult a qualified electrician or serviceman if the earthing instructions are not completely understood, or if doubt exists as to whether the appliance is properly earthed, and either:

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 accept the plug on the appliance.

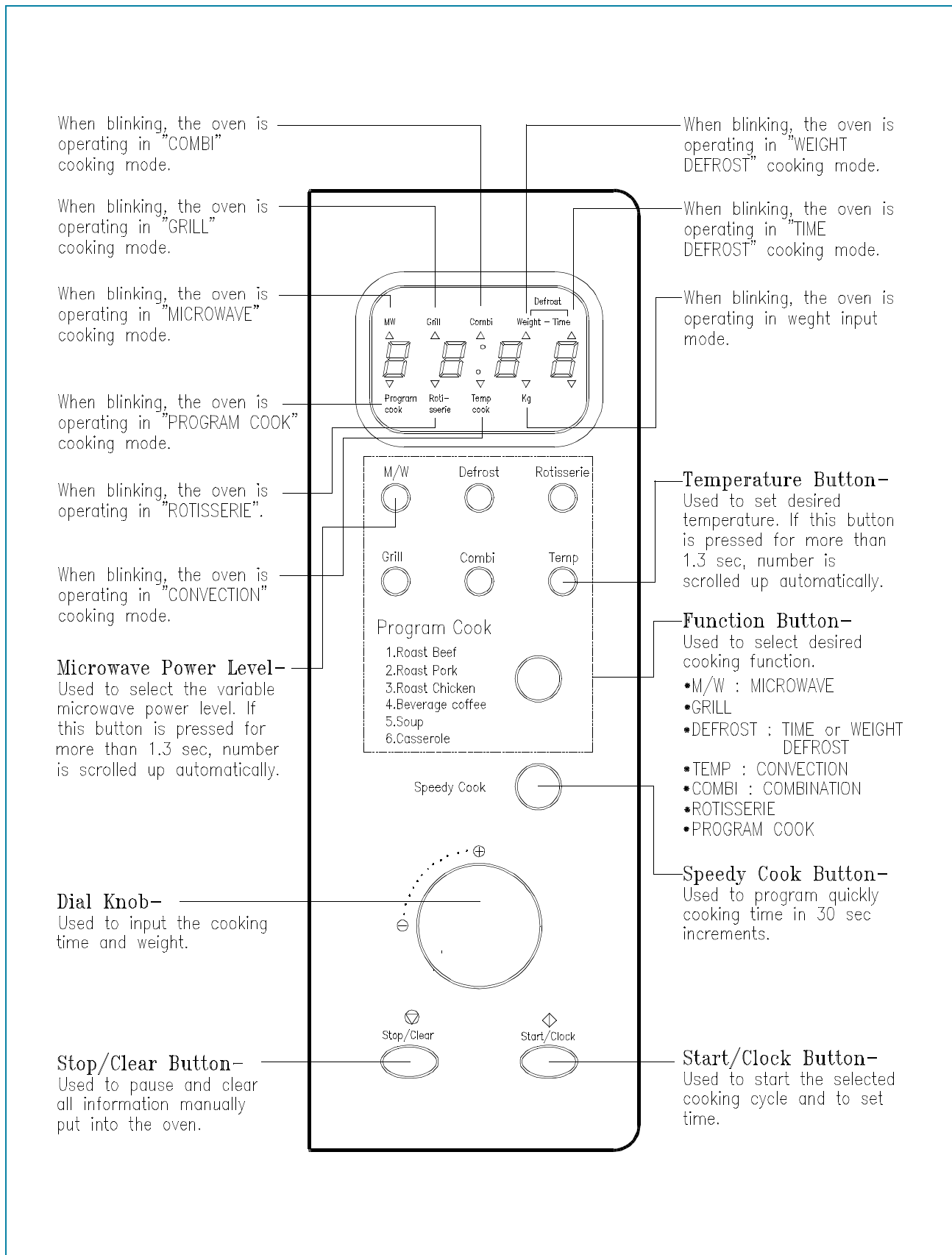
The marked rating of the extension cord should be equal to or greater than the electrical rating of the appliance, or Do not use an extension cord.

CONTROL PANEL

1. KOC-995T0S



2. KOC-995T0S11



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 earthed.

Do not operate on a two-wire extension cord.

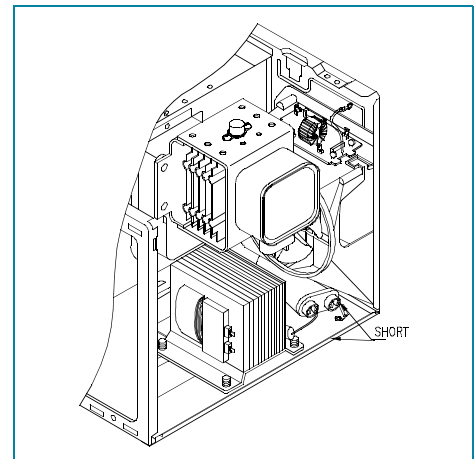
The microwave oven is designed to be used with earthed.

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 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

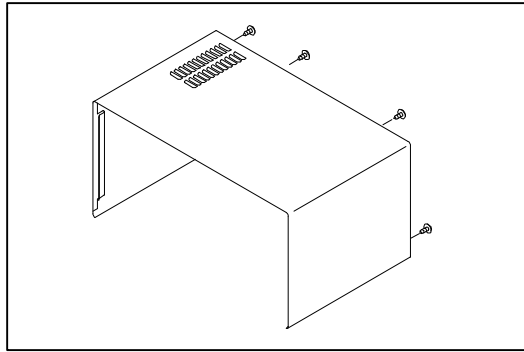
Service personnel should remove their watches whenever working close to or replacing the magnetron.

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.

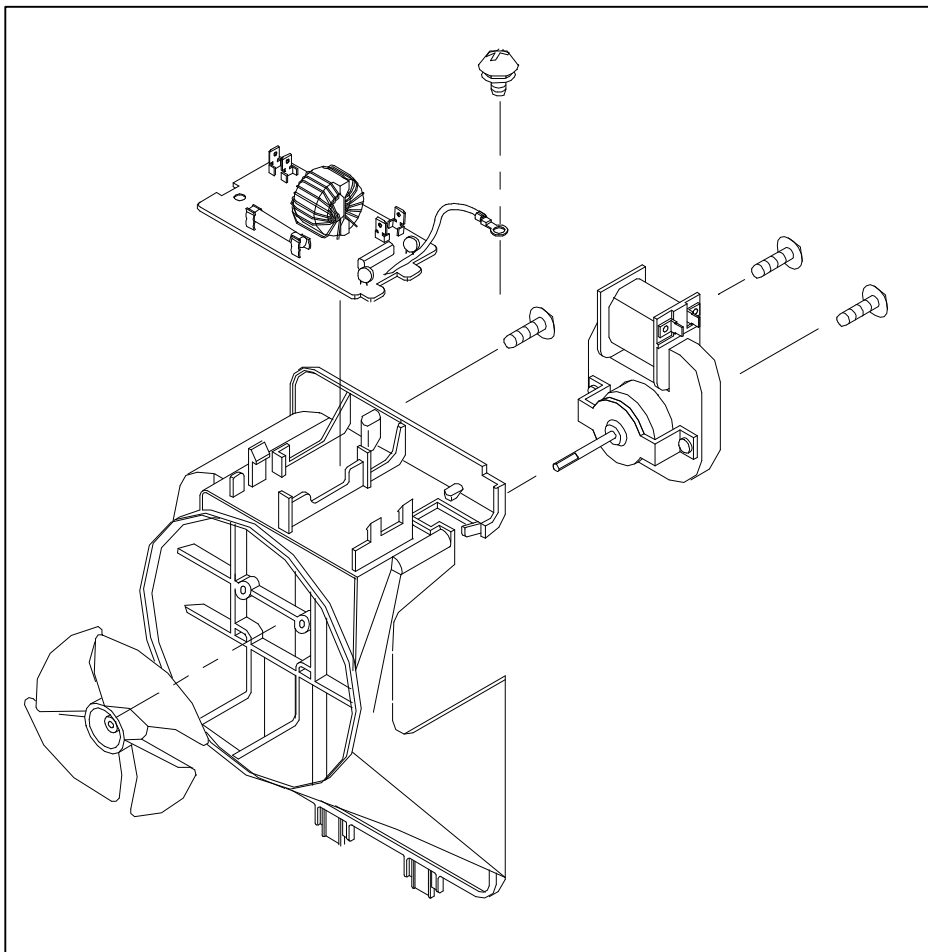
1. To remove cabinet

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



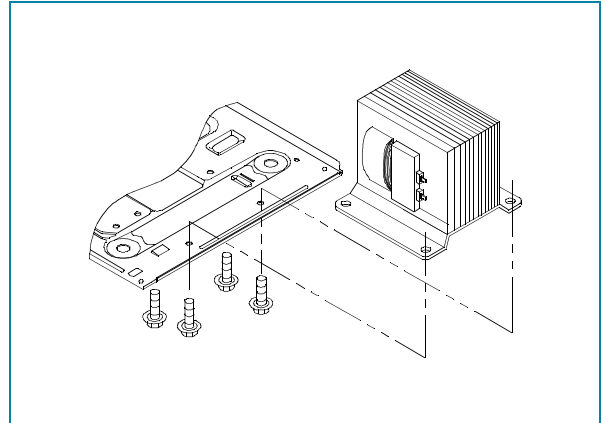
2. To remove guide wind assembly

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



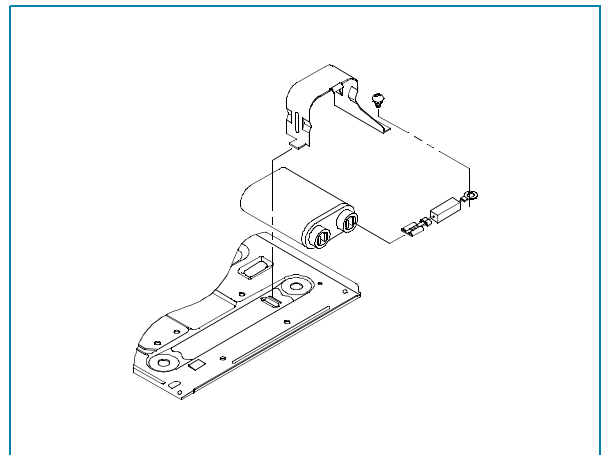
3. To remove H.V.transformer

- (1) Remove four screws which secure the H.V.transformer to the base plate.
- (2) Remove the H.V.transformer.
- (3) Reverse the above steps for reassembly.

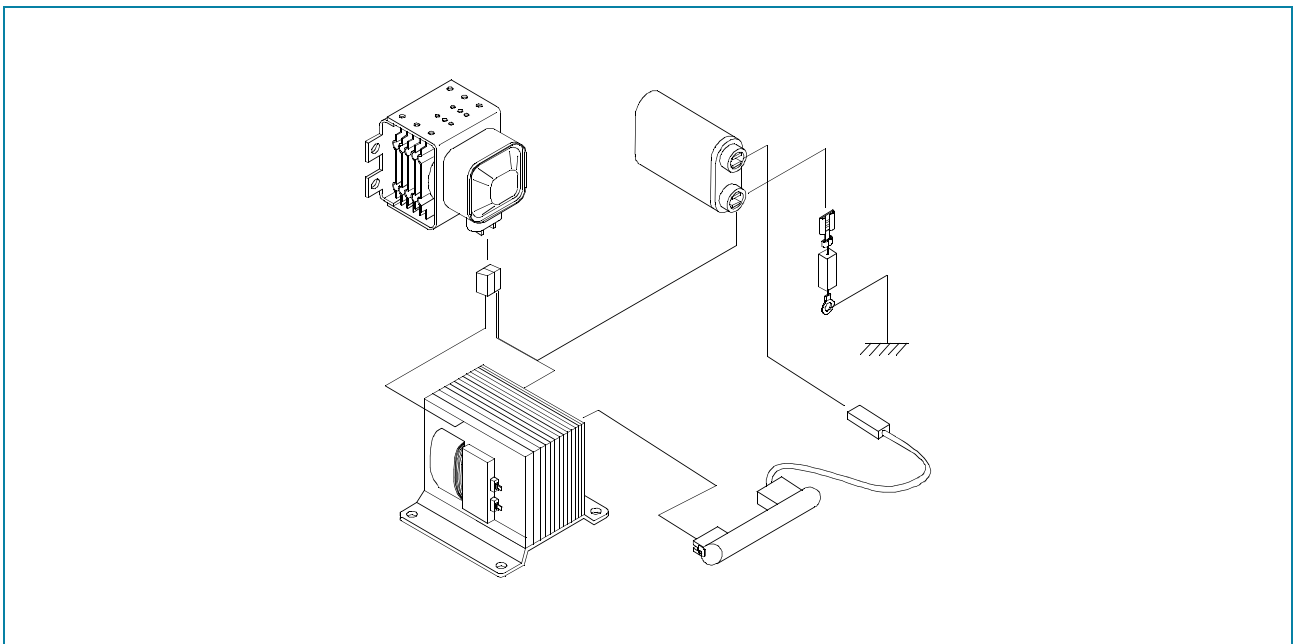


4. To remove high voltage capacitor

- (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.

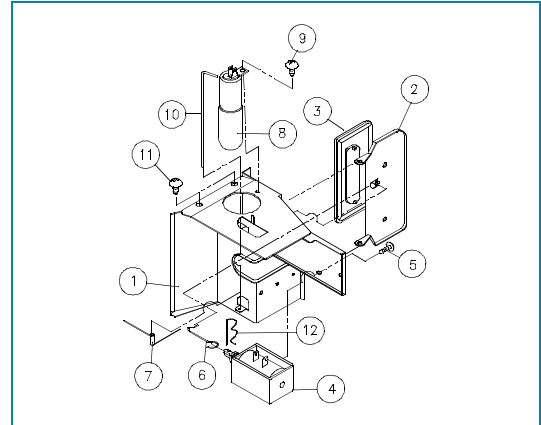


* High voltage circuit wiring



5. To remove guide air assembly

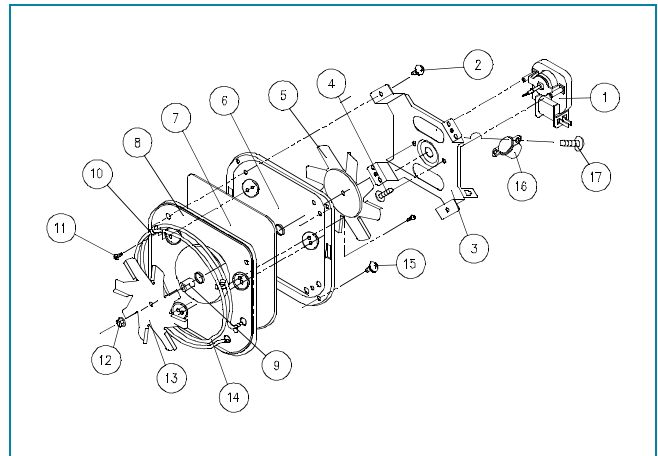
- 1) Remove two screws holding guide air assembly to the oven cavity.
- 2) Remove a screw which secure the lamp to guide air assembly.
- 3) Remove lever damper to valve damper.
- 4) Remove a screw which secure the solenoid to guide air assembly.
- 5) Reverse the above steps for reassembly.



REF CO.	PART CODE	PART NAME	DESCRIPTION	QTY	REMARK
1	3512508000	GUIDE AIR WELD AS	KOC-961C0S	1	
2	3515400200	VALVE DAMPER	SBHG-1 T0.5	1	
3	3517501000	PROTECTOR DAMPER	SILICON RUBBER	1	
4	3519000100	SOLENOID DC	DET-SL-007 DC12V	1	
5	7142400611	SCREW TAPPING	T2 TRS 456 MFZN	1	
6	3513700300	LEVER DAMPER	SUS 304 H DIA :0.8	1	
7	3515101000	SPRING DAMPER	HSWR	1	
8	3513601000	LAMP	BM 240V 25W T25	1	
9	7112401011	SCREW TAPPING	T1 TRS 4510 MFZN	1	
10	441Z724041	SHAFT DAMPER	SWRM	1	
11	7112401011	SCREW TAPPING	T1 TRS 4510 MFZN	2	
12	441Q523060	FIXTURE SOLENOID	SWC P11.0	1	

6. To remove convection part

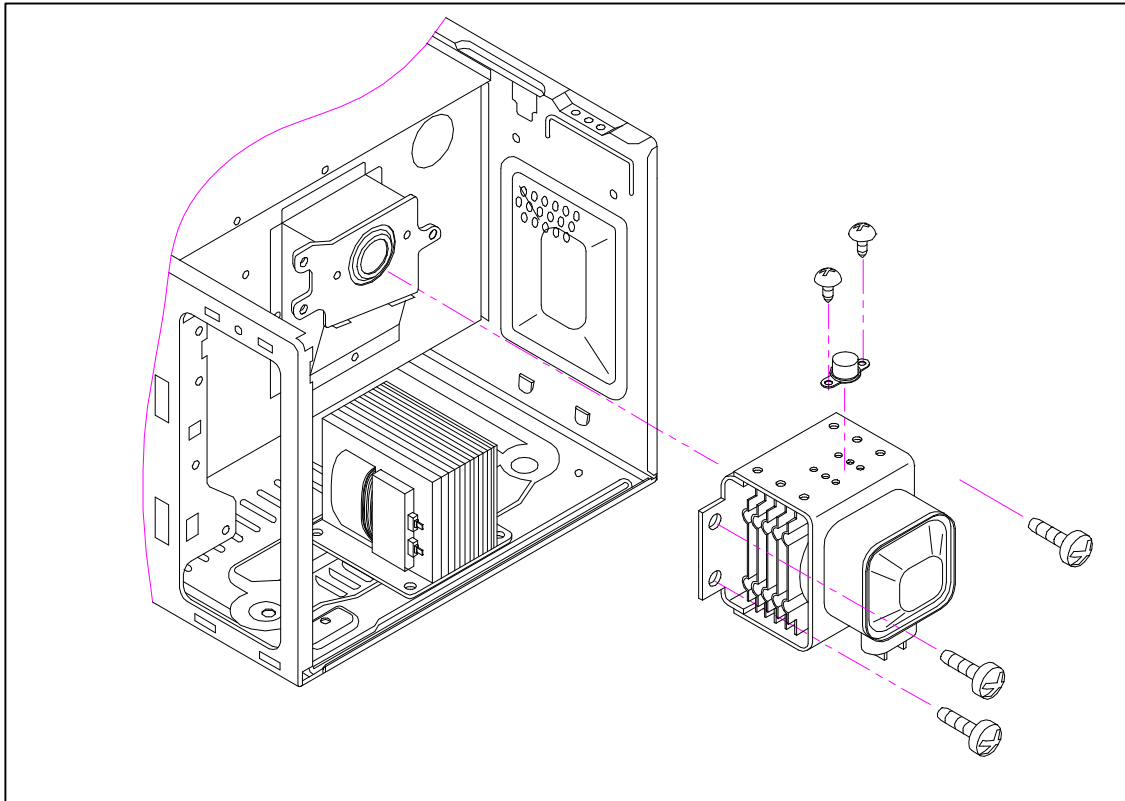
- 1) Remove four screws holding guide air assembly to the oven cavity.
- 2) Remove a special screw to convection part.
- 3) Remove the fan convection.
- 4) Remove the pipe.
- 5) Remove three screws which hold the heater to convection part.
- 6) Remove the heater to convection part.
- 7) Remove the cover reflector to convection part.
- 8) Remove the insulator to the convection part.
- 9) Remove four screws which secure cover insulator to the bracket motor shaded.
- 10) Remove the cover insulator to the convection part.
- 11) Remove the fan to the convection part.
- 12) Remove two screws which secure the motor shaded pole to the bracket motor shaded.
- 13) Remove the screw which secure the thermostat to the bracket motor.
- 14) Reverse the above steps for reassembly.



REF CO.	PART CODE	PART NAME	DESCRIPTION	QTY	REMARK
1	3963513700	MOTOR SHADED POLE	230V 50HZ OEM-10DWC2-C07	1	
2	7S312X4081	SCREW TAPPING	T1 TRS 458 SE MFZN	4	
3	3510601500	BRACKET MOTOR SHADED	SBHG-1 T0.8	1	
4	7051400811	SCREW MACHINE	PAN 458 SW MFZN	2	
5	441B629071	FAN	SA1D-80 T0.5	1	
6	3511404000	COVER INSULATOR	SA1D-80 T0.7	1	
7	3513301600	INSULATOR *B	CERAMIC BLANKET T0.6	1	
8	3511404100	COVER REFLECTOR	SA1D-80 T0.7	1	
9	3514400410	PIPE	A1100BR	1	
10	3513002300	HOLDER HEATER	SUS304 T0.5	3	
11	7121400811	SCREW TAPPING	T2S PAN 458 MFZN	5	
12	7S627W40X1	SPECIAL SCREW	NUT FLANGE M4 MFZN	1	
13	3511800400	FAN CONVECTION	SA1D-80 T0.5	1	
14	3512801800	HEATER	230V 1400W 1R18344	1	
15	7112401011	SCREW TAPPING	T1 TRS 4510 MFZN	4	
16	3518903800	THERMOSTAT	OFF:160 ON:115 V#187	1	
17	7121400811	SCREW TAPPING	T2S PAN 458 MFZN	1	

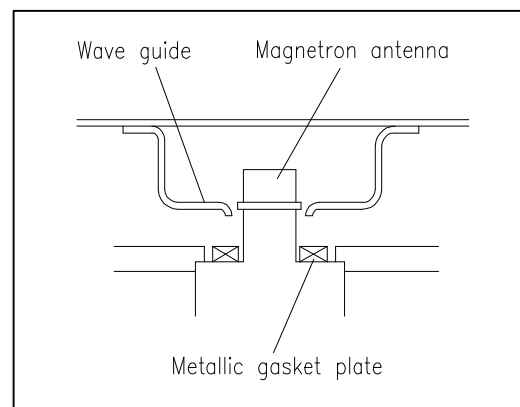
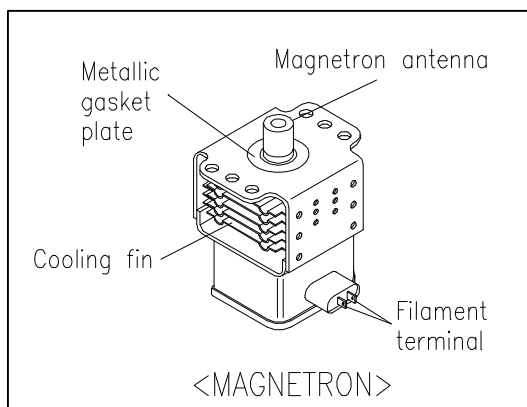
7. To remove magnetron

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



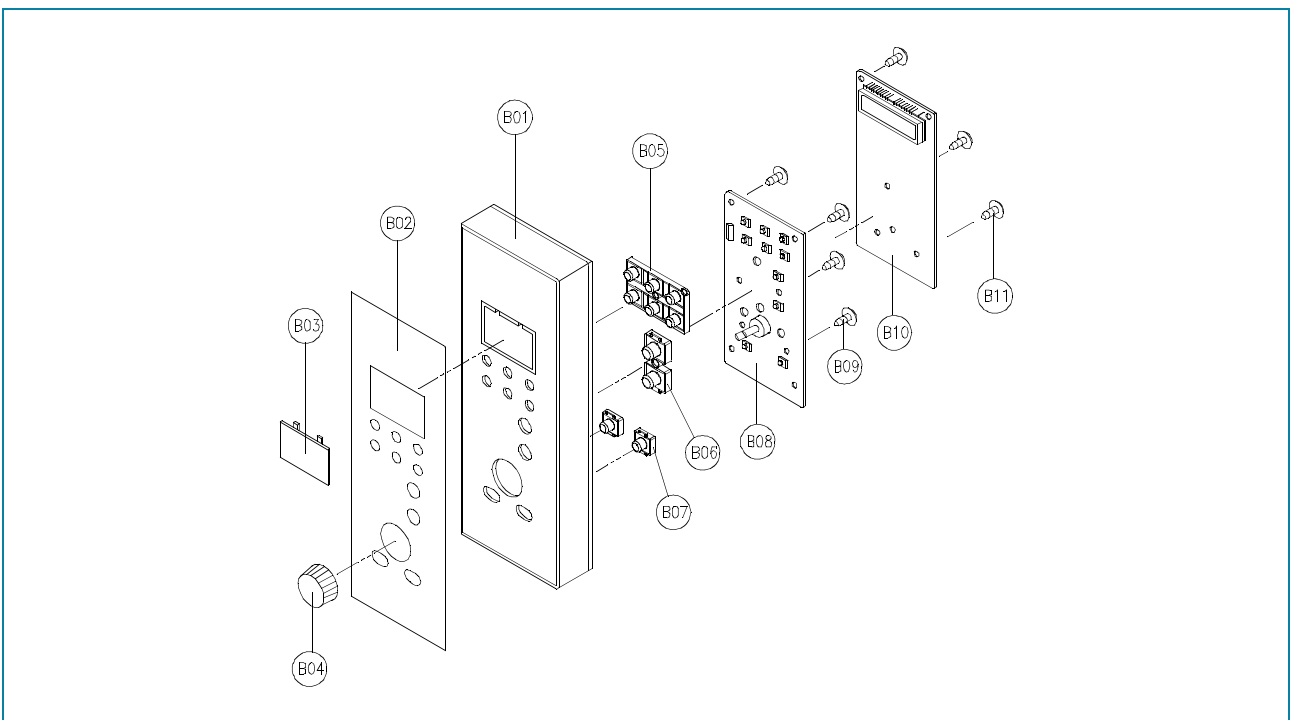
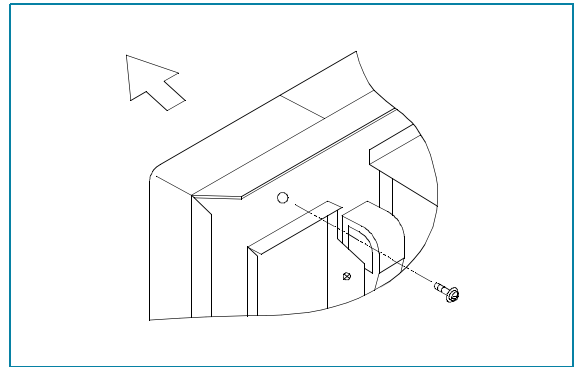
WARNING

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 control panel assembly

- (1) Remove a screw which secure the control panel assembly to the oven front plate.
At the same time, draw forward the control panel assembly from the oven front plate.
- (2) Remove the dial knob.
- (3) Remove ten screws which secure the main and sub PCB assembly to control panel.
- (4) Remove buttons.
- (5) Remove the window display.



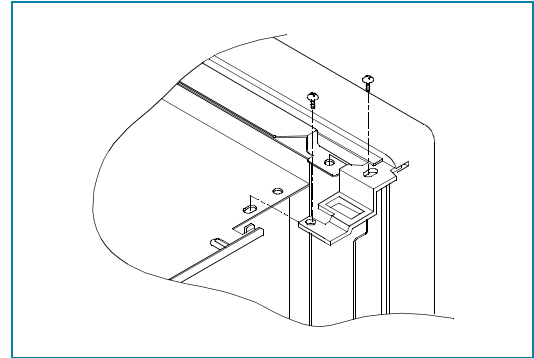
REF CO.	PART CODE	PART NAME	DESCRIPTION	QTY	REMARK
B01	3516719230	CONTROL-PANEL	PC	1	
B02	3511603100	DECORATOR C-PANEL	STS304 T0.6 H/L	1	
B03	3515501400	WINDOW DISPLAY	PMMA IF-850	1	SMOG
B04	3513404620	KNOB VOLUME	ABS XR-401	1	COATING
B05	3516905120	BUTTON FUNCTION	ABS XR-401	1	COATING
B06	3516907200	BUTTON FUNCTION	ABS XR-401	1	COATING
B07	3516906320	BUTTON FUNCTION	ABS XR-401	2	COATING
B08	3514321800	PCB SUB AS	KOC-995T0S	1	
B10	3514312810	PCB MAIN AS	KOC-995T0S	1	
	3514320330	PCB MAIN AS	KOC-995T0S11	1	
B11	7122401211	SCREW TAPPING	T2S TRS 4x12 MFZN	4	

9. To remove door assembly

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

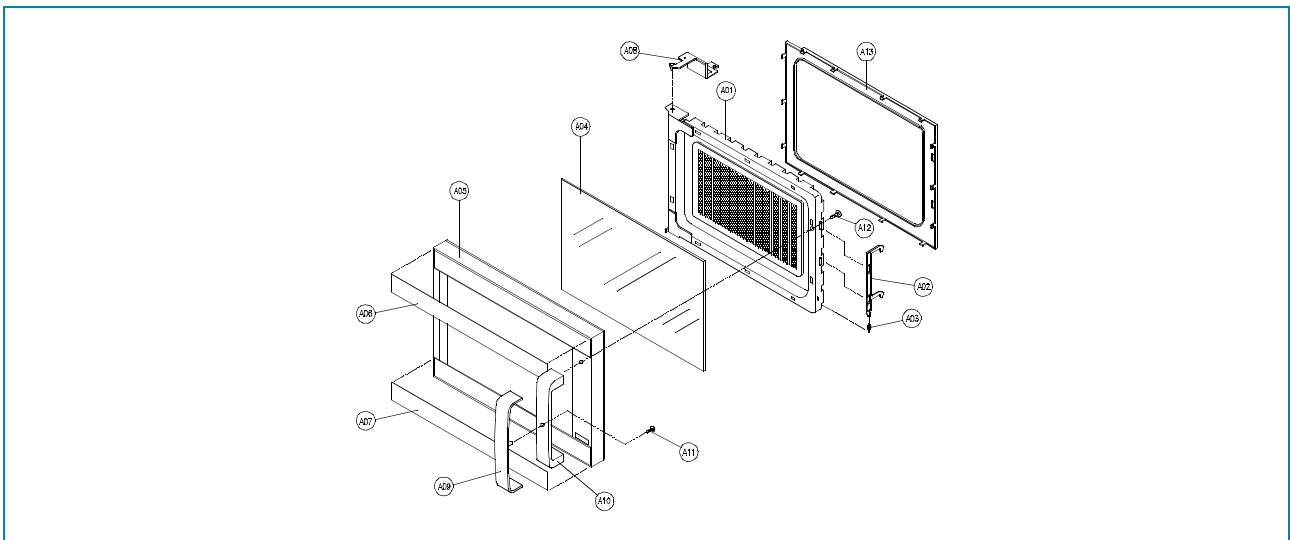
NOTE

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



10. To remove door parts

- (1) Remove the gasket door.
- (2) Remove the door seal assy.
- (3) Remove the hook and spring.
- (4) Remove the barrier-screen *o.
- (5) Remove two screws.
- (6) Remove the handle from the frame door.



REF. NO.	PART CODE	PART NAME	DESCRIPTION	QTY	REMARK
A01	3511708400	DOOR SEAL AS	KOC-971C0S	1	
A02	3513101100	HOOK	POM	1	
A03	3515101300	SPRING HOOK	PW1	1	
A04	3517004080	BARRIER-SCREEN *O	TEMPERED GL T3.2	1	MIRROR
A05	3512204020	FRAME DOOR	PC	1	
A06	3511603200	DECORATOR DOOR *T	STS304 T0.6 H/L	1	
A07	3511603300	DECORATOR DOOR *U	STS304 T0.6 H/L	1	
A08	3515203610	STOPPER HINGE *T AS	KOC-995T0S	1	
A09	3512602410	HANDLE DOOR *T AS	ABS XR-401 SILVER	1	KOC-985T
A10	3512602300	HANDLE DOOR *U	ABS XR-401	1	
A11	7121300811	SCREW TAPPING	T2S PAN 3x8 MFZN	1	
A12	7121400811	SCREW TAPPING	T2S PAN 4x8 MFZN	1	
A13	3512300800	GASKET DOOR	PBT	1	

11. 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'

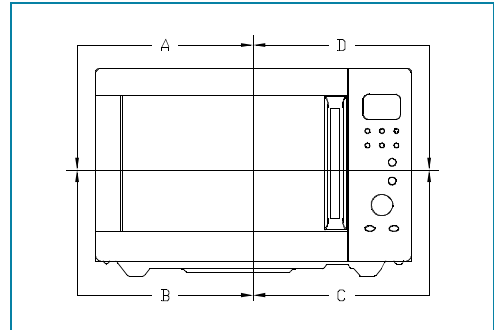
- Loosen two screws on stopper hinge under, and then push the door to contact the door seal to oven front surface.
- Tighten two screws.

(3) To reduce gap located on part 'C'

- Loosen a screw on interlock switch assembly located bottom of oven body.
- Draw the interlock switch assembly inward as possible to engage with hook on the door bottom.
- Tighten a screw.

(4) To reduce gap located on part 'D'

- Loosen a screw on interlock switch assembly located top of oven body.
- Following steps are same as step (3).



NOTE

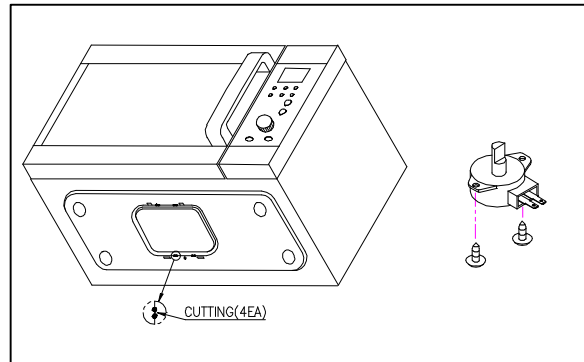
Small gap may be acceptable if the microwave leakage does not exceed $1\text{mW}/\text{cm}^2$.

NOTE

The door on a microwave oven is designed to act as an electronic seal preventing the leakage of microwave energy from the oven cavity during the cook cycle. This function does not require that the door be air-tight, moisture (condensation) Tight or light-tight. Therefore, the occasional appearance of moisture, light or the sensing of gentle warm air movement around the oven door is not abnormal and do not of themselves, indicate a leakage of microwave energy from the oven cavity. If such were the case, your oven could not be equipped with a vent, the very purpose of which is to exhaust the vapor-laden air from the oven cavity.

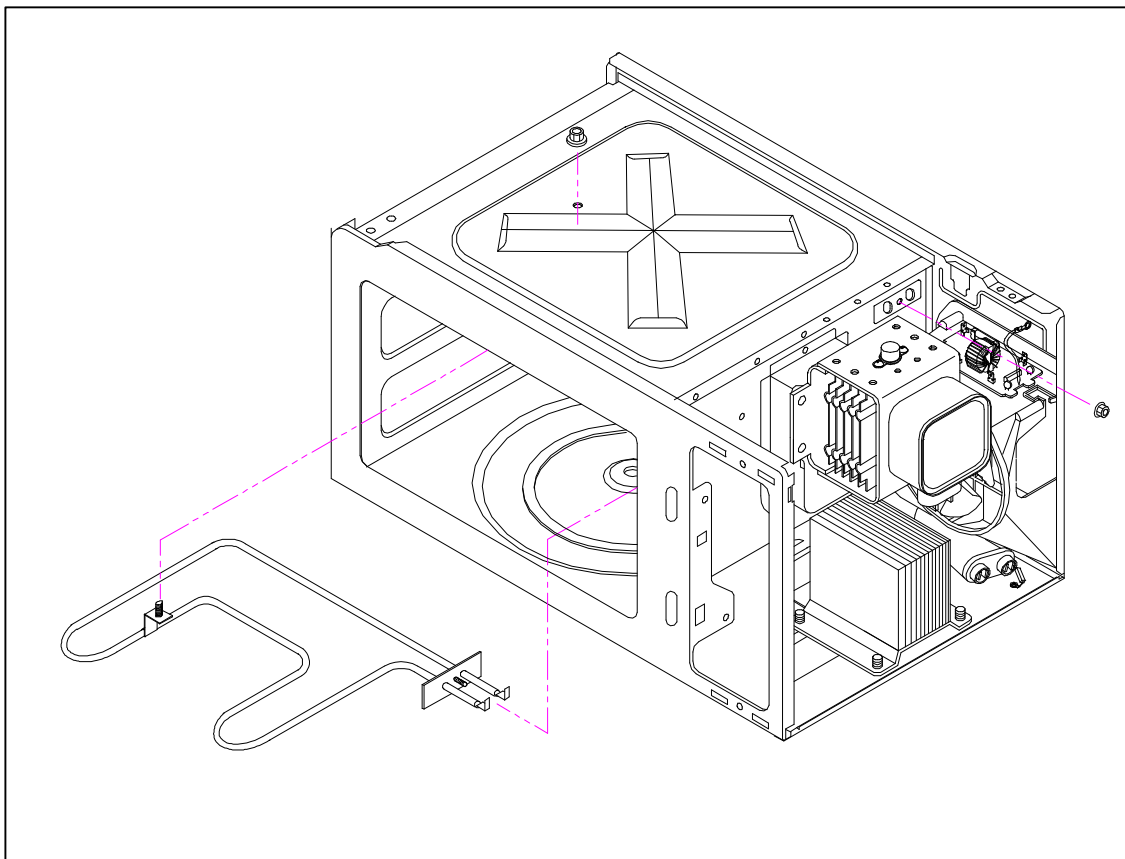
13. To remove tray motor

- 1) Cut the tray motor cover parts from the base plate.
- 2) Remove two screws which secure the tray motor.



14. To remove grill heater assembly

- 1) Release two hex nuts holding the Grill Heater Assembly to top and side plate.
- 2) Remove Grill Heater Assembly.



INTERLOCK MECHANISM AND ADJUSTMENT

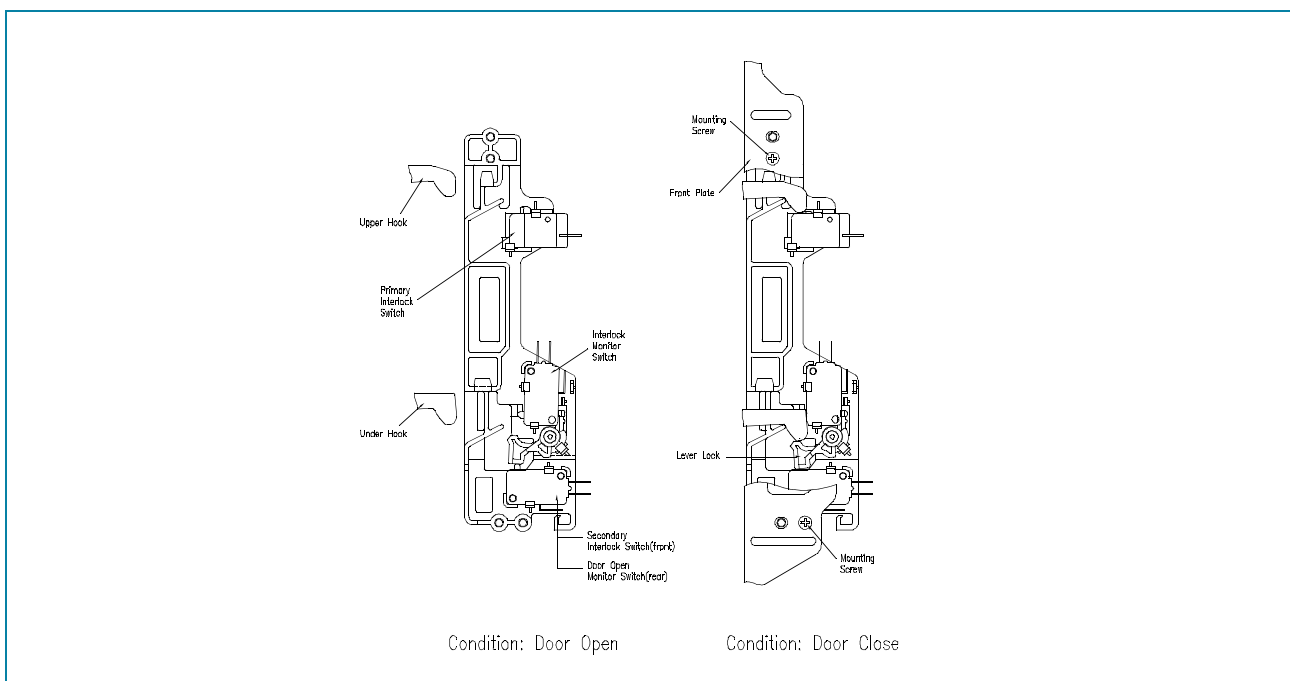
The door lock mechanism is a device which has been specially designed to completely eliminate microwave radiation when the door is opened during operation, and thus to perfectly prevent the danger resulting from the leakage of microwave.

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, door open monitor switch and interlock monitor switch

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



ADJUSTMENT

Interlock monitor switch

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

3. Adjustment steps

- (1) Loosen two mounting screws.
- (2) Adjust interlock switch assembly position.
- (3) Make sure that latch lever moves smoothly after adjustment is completed.
- (4) 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.

TROUBLE SHOOTING GUIDE

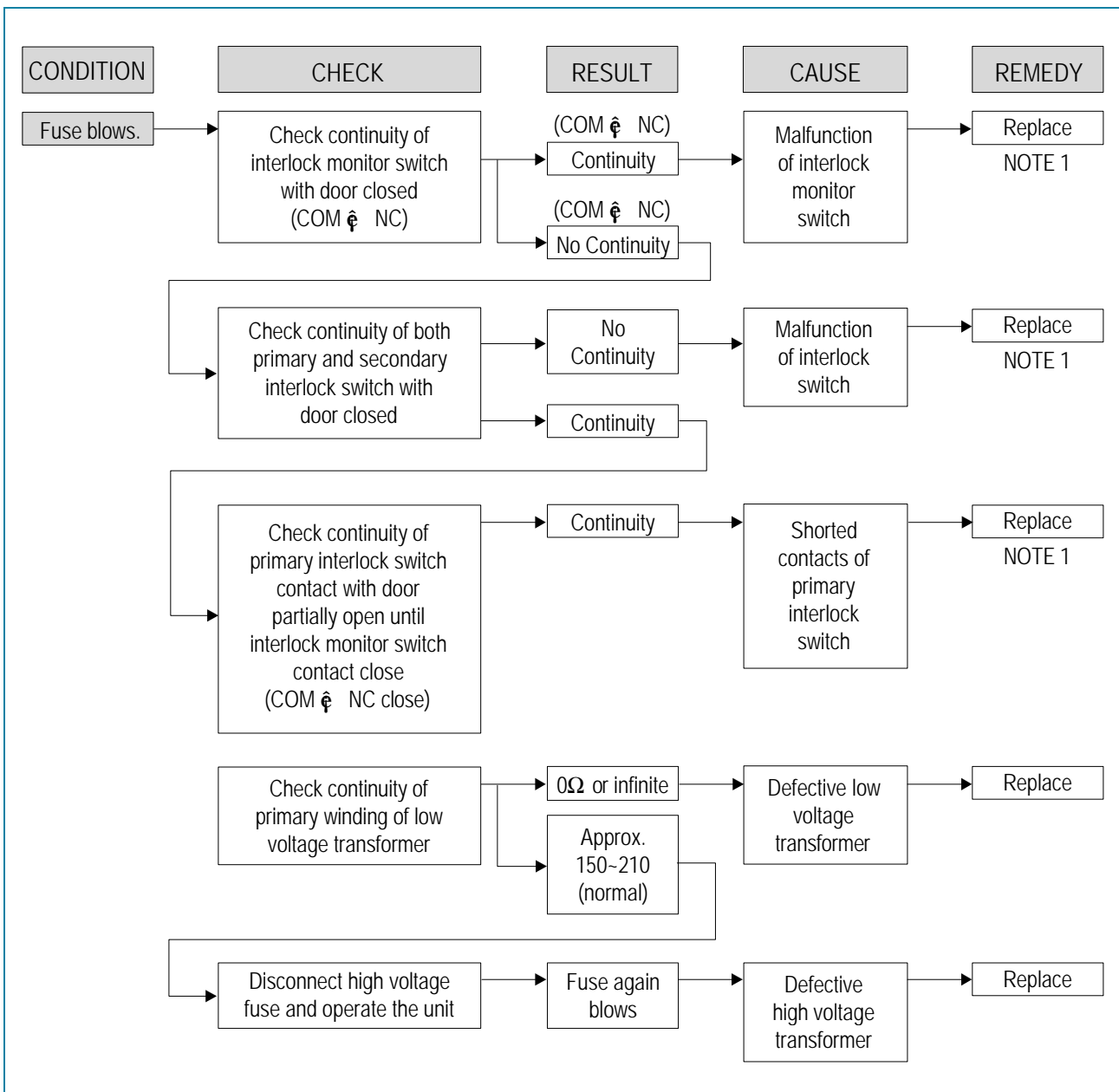
Following the procedures below to check if the oven is defective or not.

1. Check grounding before checking trouble.
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 then check continuity with the AC plug removed. To do otherwise may result in a false reading or damage to your meter.

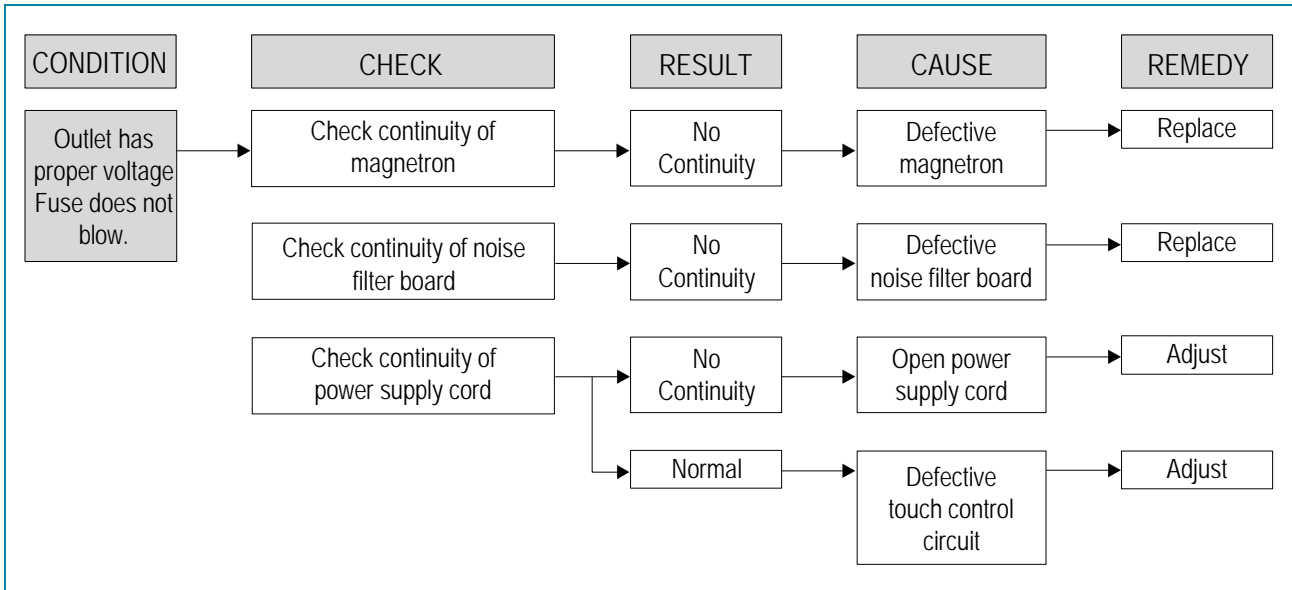
NOTE

When electric parts are checked, be sure the power cord is not inserted into the wall outlet. Check wire harness, wiring, and connected of the terminals and power cord before check parts listed below.

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



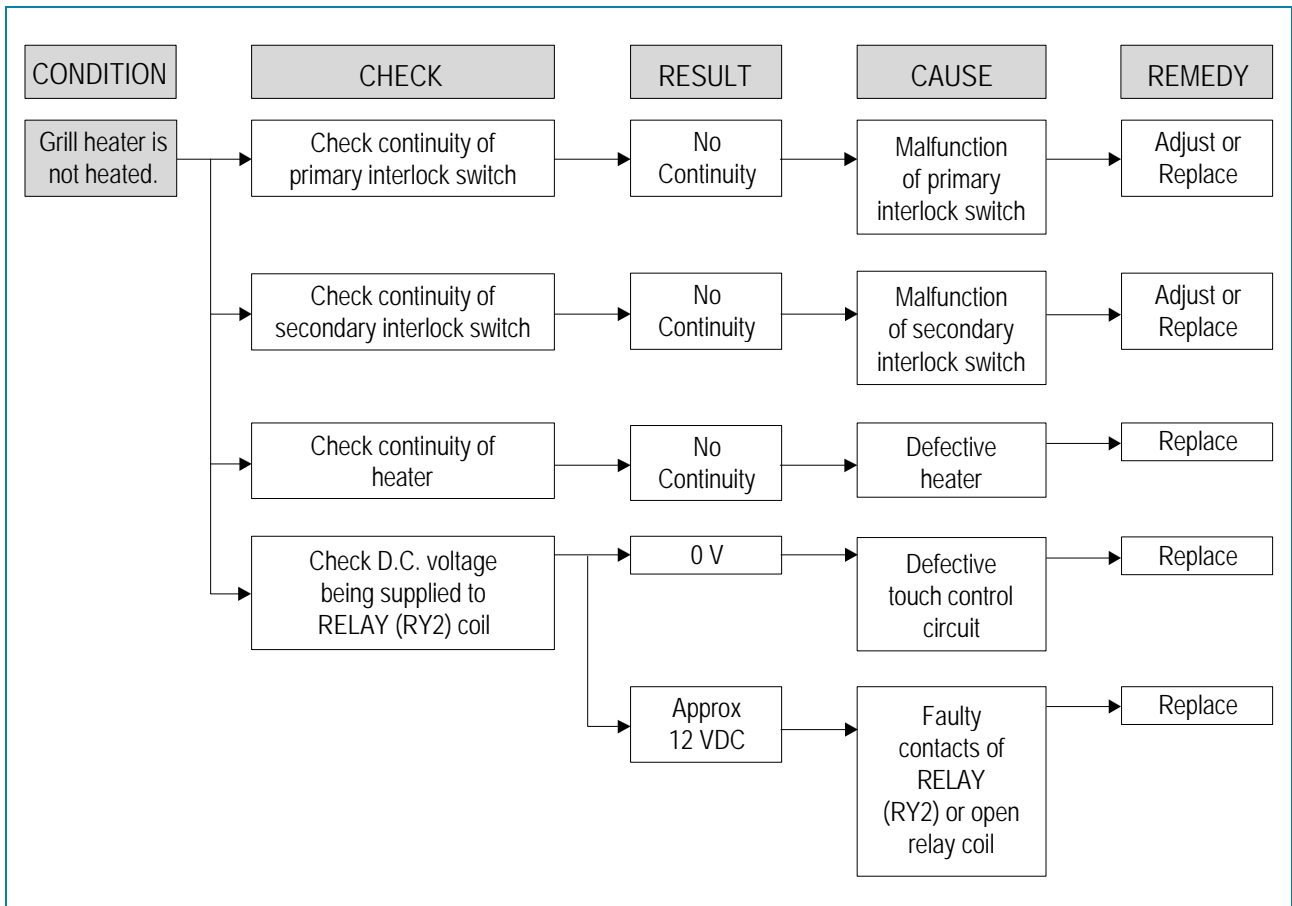
TROUBLE SHOOTING GUIDE



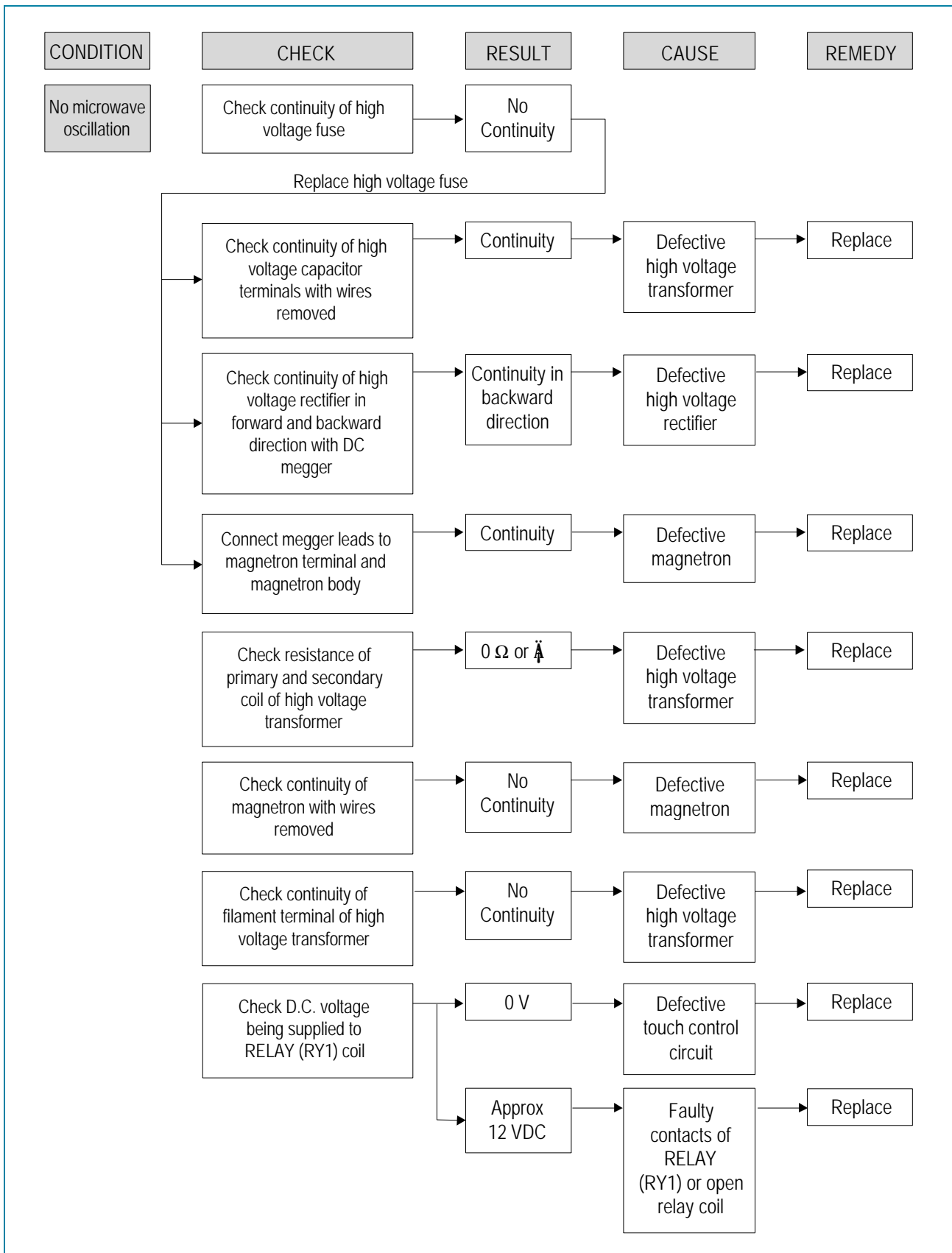
NOTE

All these switches must be replaced at the same time, please refer to (7. Interlock Mechanism and Adjust) for adjustment instructions.

(TROUBLE 2) Grill heater (top heater) is not heated; Food will not become hot.

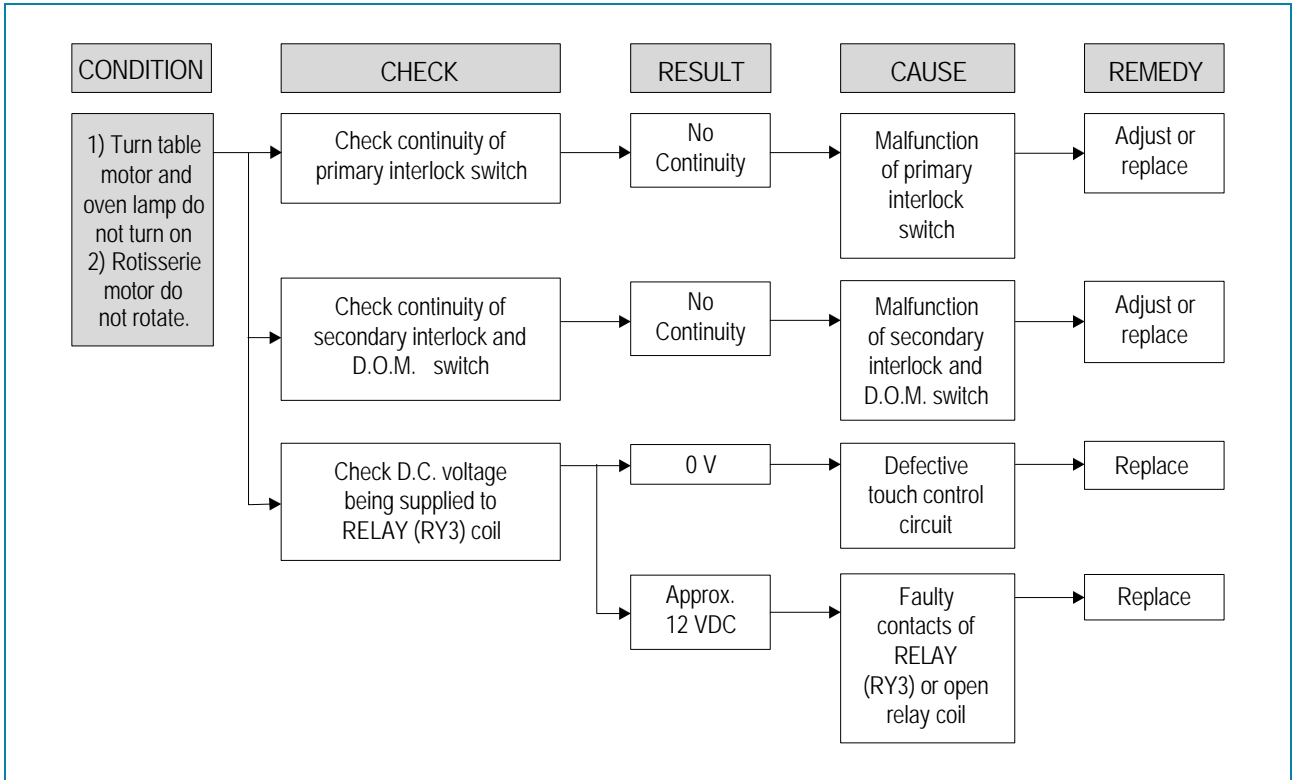


(TROUBLE 3) No microwave oscillation even though fan motor rotates.

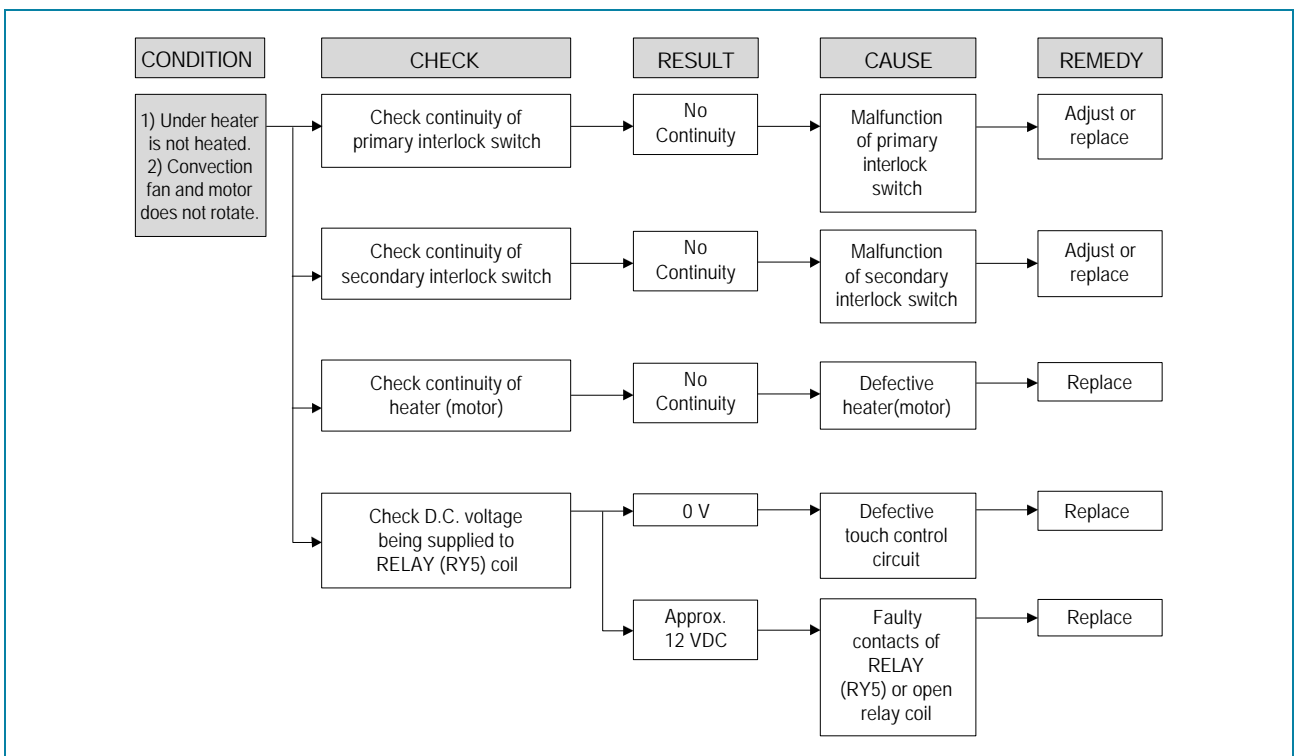


TROUBLE SHOOTING GUIDE

(TROUBLE 4) Display shows all figures selected, but oven does not start cooking, even though desired program and time are set and start pad is tapped.

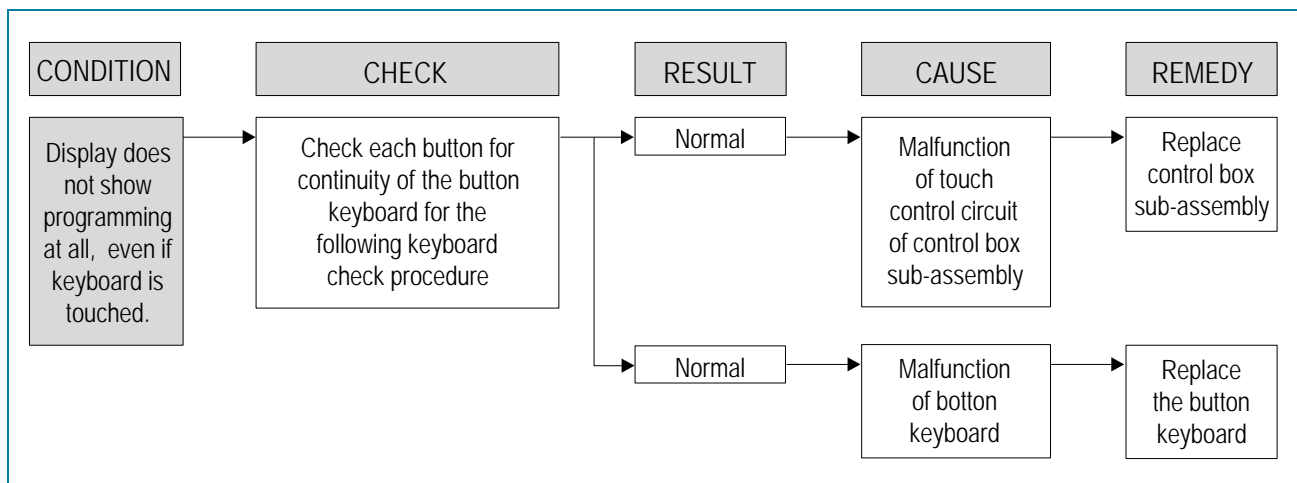
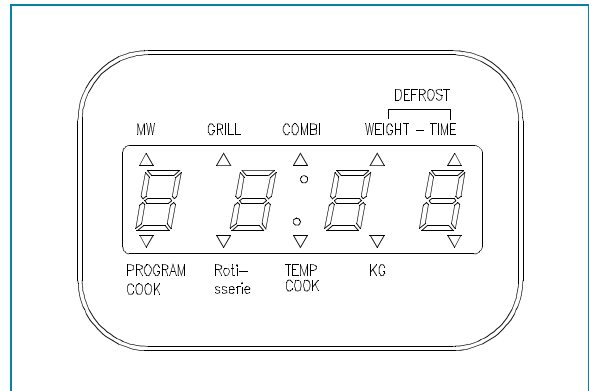


(TROUBLE 5) 1) Under heater is not heated; Food will not become hot.
2) Convection motor does not rotate.



(TROUBLE 6) The following visual conditions indicate a probable defective touch control circuit or button P.C.B. assembly.

1. Incomplete segments
 - (1) Segments missing
 - (2) Partial segments missing
 - (3) Digit flickering other than normal fluorescent slight flickering
 - (4) 0 does not display when power is on.
2. A distinct change in the brightness of one or more numbers exists in 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.
(for example, even if one touched 5, 3 appears in the display.)
5. Specific numbers (for example, 2 or 3) do not display when the button 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 noticeably too fast while cooking.
10. Display does not show the time of day when clear button is touched.
11. Oven lamp and turntable motor do not stop although cooking is finished.
Check if the RELAY (RY3) contacts close and if they are close, replace touch control circuit.

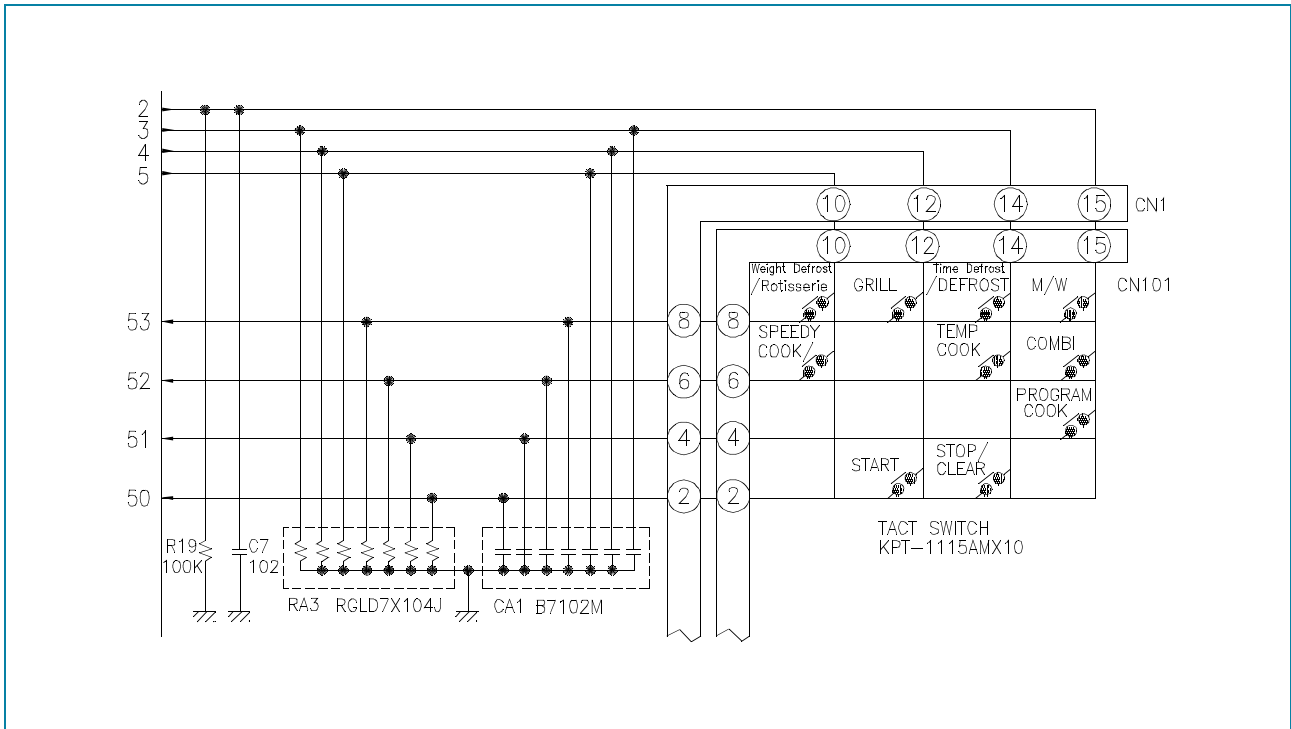


NOTE

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

BUTTON KEYBOARD CHECK PROCEDURE

1. Type of button names



(key metrix and circuit diagram)

The tact switch keyboard consists of 10 keys which configurations are described above.

2. Key check procedure

To determine if the tact switch keyboard is defective or not, check the continuity of each button(key) contacts with a multimeter.

- | | |
|-------------------|--|
| 1) PROGRAM COOK | button : between 4 and 15 |
| 2) TIME DEFROST | button : between 8 and 14 (KOC-995T0S) |
| / DEFROST | button : between 8 and 14 (KOC-995T0S11) |
| 3) COMBI | button : between 6 and 15 |
| 4) GRILL | button : between 8 and 12 |
| 5) M/W | button : between 8 and 15 |
| 6) WEIGHT DEFROST | button : between 8 and 10 (KOC-995T0S) |
| / ROTISSERIE | button : between 8 and 10 (KOC-995T0S11) |
| 7) SPEEDY COOK | button : between 6 and 10 |
| 8) TEMP | button : between 6 and 14 |
| 9) START/CLOCK | button : between 2 and 12 |
| 10) STOP/CLEAR | button : between 2 and 14 |

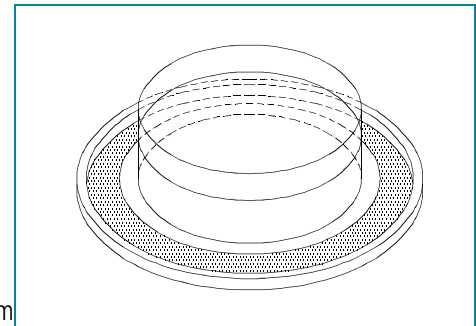
MEASUREMENT AND TEST

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 ± 2 °C (50 ± 3.6 °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.
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 form



$$P = 4187 \frac{\Delta T}{t}$$

- ΔT is difference between initial and ending temperature.
- t is the heating time.

The power measured should be **B** (refer to Specifications) ± 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 ± 2 °C (68 ± 3.6 °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. ELECTRICAL CONTINUITY CHECK OF INTERLOCK SWITCH

NOTE

Remove the power plug from the wall receptacle before testing.

PROCEDURE

1. Primary interlock switch
 - (1) Disconnect two connectors from primary interlock switch.
 - (2) Connect the ohm-meter leads between the terminals of the primary interlock switch.
2. Read the value of resistance between the terminals of the switch, when the door is opened, and when the door is closed.
3. Secondary interlock switch
 - (1) Disconnect two connectors from secondary interlock switch.
 - (2) Connect the ohm-meter leads between the terminals of the secondary interlock switch.
 - (3) Read the value of resistance between the terminals of the switch, when the door is opened, and when the door is closed.
3. Monitor interlock switch
 - (1) Disconnect the lead wire connecting the primary interlock switch and interlock monitor switch from primary interlock switch terminal.
 - (2) Connect the ohm-meter leads between the lead wire connector disconnected as item1 and the power supply neutral plug pin.
 - (3) Read the value of resistance between the lead wire connector and the power supply neutral plug pin, when the oven door is opened, and when the oven door is closed.

JUDGEMENT

- The value of resistance should be applied to the value specified below.

Switch	Door Open	Door Close
Primary interlock switch	∞	0
Secondary interlock switch	∞	0
Interlock monitor circuit	0	∞

- When value obtained is not acceptable, the switch should be replaced or adjusted again.

3. MICROWAVE RADIATION TEST

WARNING

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

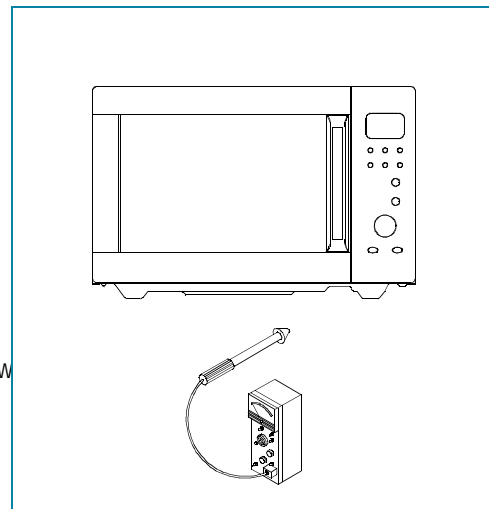
PROCEDURE

1. Prepare Microwave Energy Survey Meter, 600cc glass beaker, and glass thermometer 100°C (212°F).
2. Pour 275cc ±15cc of tap water initially at 20 ± 5 °C (68 ± 9°F) in the 600 cc glass beaker with an inside diameter of approx. 95 mm(3.5 in.).
3. Place it at the center of the tray and set it in a cavity.
4. Close the door and operate the oven.
5. Measure the leakage by using Microwave Energy Survey Meter with dual ranges, set to 2450MHz.
 - 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.
 - 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.

- 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.
- 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.

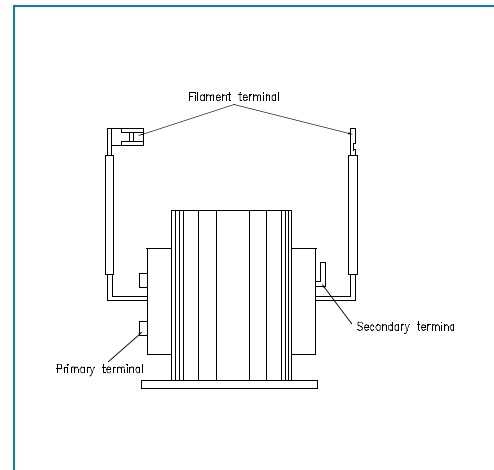


4. COMPONENT TEST PROCEDURE

- 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. $100\ \Omega$ \approx 10%
 - Filament winding ... Approx. $0.1\ \Omega$
 - Primary winding ... Approx. $1.5\ \Omega$



2. High voltage capacitor

- (1) Check continuity of capacitor with meter on the highest OHM scale.
- (2) A normal capacitor will show continuity for a short time, and then indicate $9M\ \Omega$ once the capacitor is charged.
- (3) A shorted capacitor will show continuous continuity.
- (4) An open capacitor will show constant $9M\ \Omega$
- (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 Output Power." Continuity checks can only indicate an open filament or a shorted magnetron.

To diagnose for an open filament or a shorted magnetron,

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

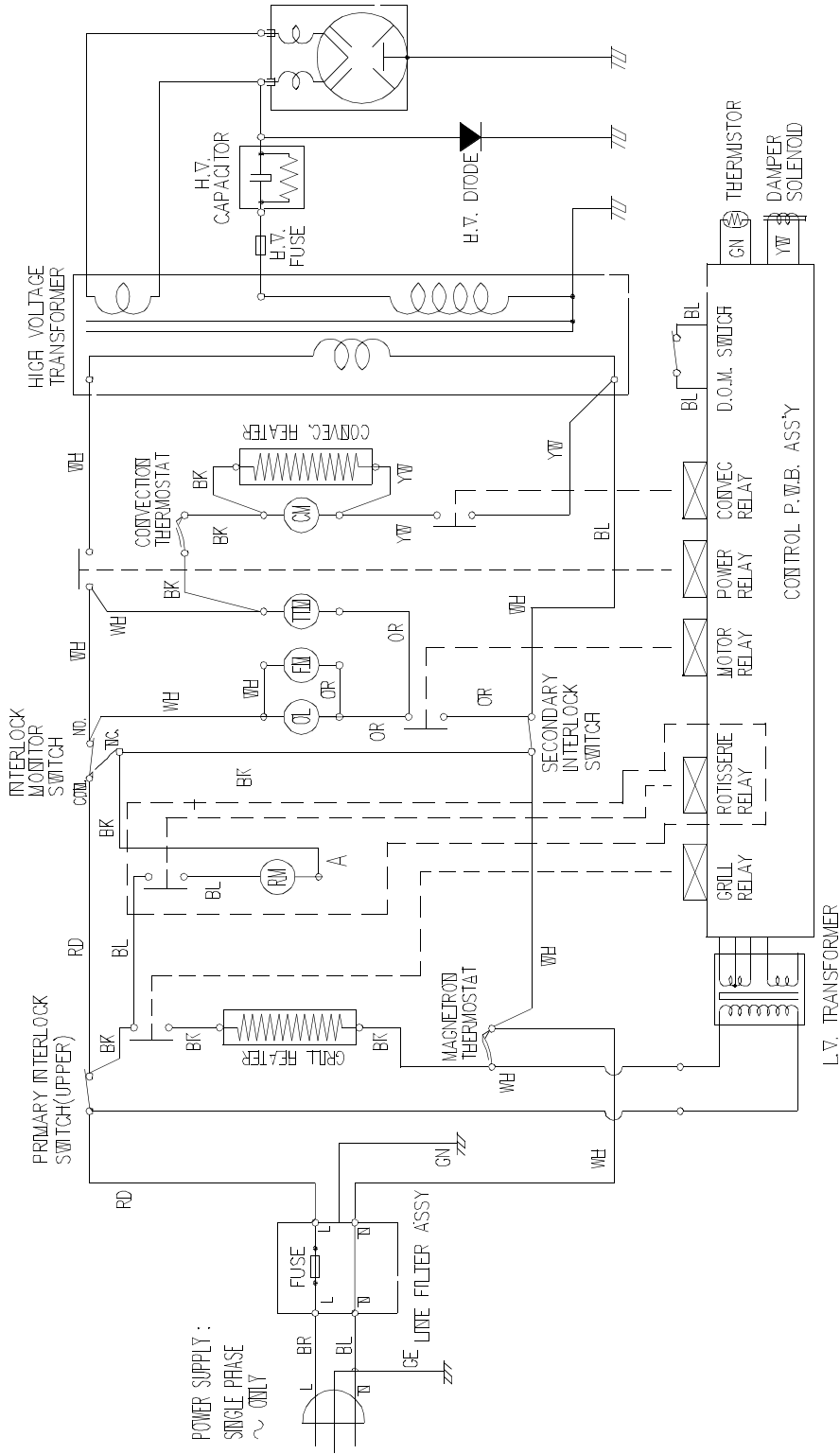
5. Fuse

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

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

Replace just the fuse if the switches operate normally.

WIRING DIAGRAM

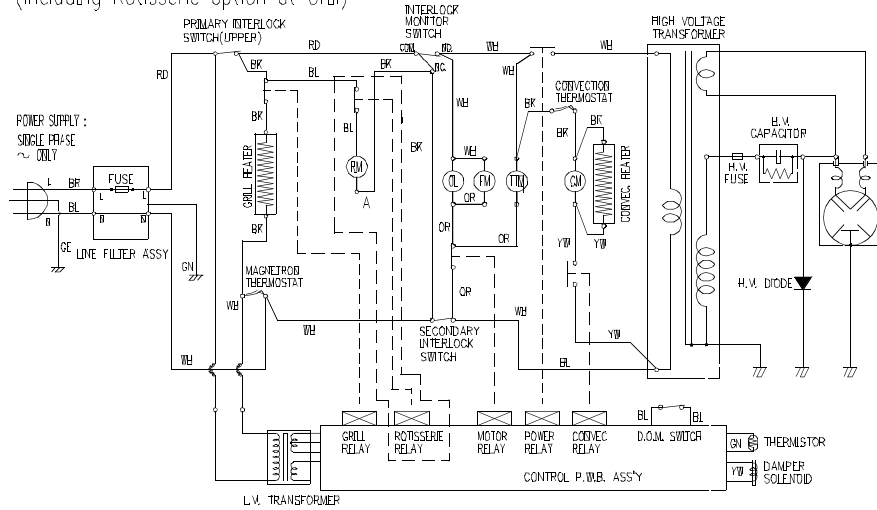


CONDITION

- 1.DOOR : CLOSED OL : OVEN LAMP
- 2.COOK : OFF FM : FAN MOTOR
- TTM : TURNTABLE MOTOR
- RM : ROTISSERIE MOTOR
- OR : ORANGE
- BR : BROWN
- RD : RED
- WH : WHITE
- BK : BLACK
- YW : YELLOW
- BL : BLUE
- BR : BROWN
- GN : GREEN
- GE : GREEN / YELLOW
- BL : BLUE
- BR : BROWN

A : ROTISSERIE OPTION ONLY

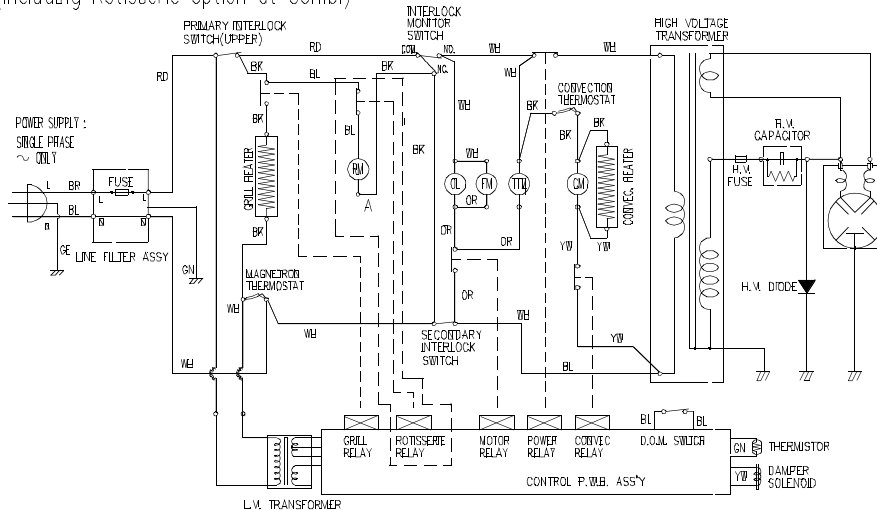
GRILL COOKING CONDITION
(Including Rotisserie option at Grill)



CONDITION

- | | | | |
|-----------------|-----------------------|-------------|---------------------|
| 1.DOOR : CLOSED | OL : OVEN LAMP | RD : RED | GN : GREEN |
| 2.COOK : OFF | FM : FAN MOTOR | WH : WHITE | GE : GREEN / YELLOW |
| | TM : TURNTABLE MOTOR | BK : BLACK | BL : BLUE |
| | RM : ROTISSERIE MOTOR | YW : YELLOW | BR : BROWN |
| | | OR : ORANGE | |
- [A] : ROTISSERIE OPTION ONLY

COMBI COOKING CONDITION
(Including Rotisserie option at Combi)

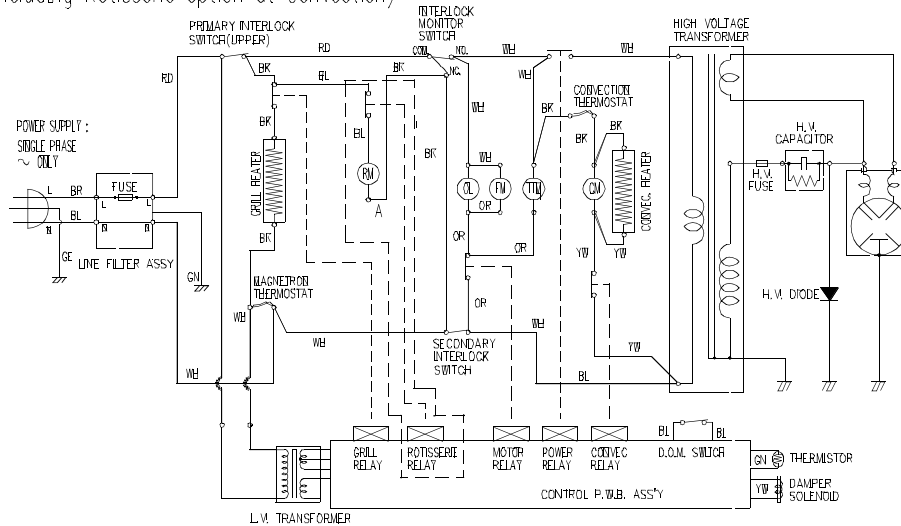


CONDITION

- | | | | |
|-----------------|-----------------------|-------------|---------------------|
| 1.DOOR : CLOSED | OL : OVEN LAMP | RD : RED | GN : GREEN |
| 2.COOK : OFF | FM : FAN MOTOR | WH : WHITE | GE : GREEN / YELLOW |
| | TM : TURNTABLE MOTOR | BK : BLACK | BL : BLUE |
| | RM : ROTISSERIE MOTOR | YW : YELLOW | BR : BROWN |
| | | OR : ORANGE | |
- [A] : ROTISSERIE OPTION ONLY

SCHEMATIC DIAGRAM

CONVECTION COOKING CONDITION (Including Rotisserie option at Convection)



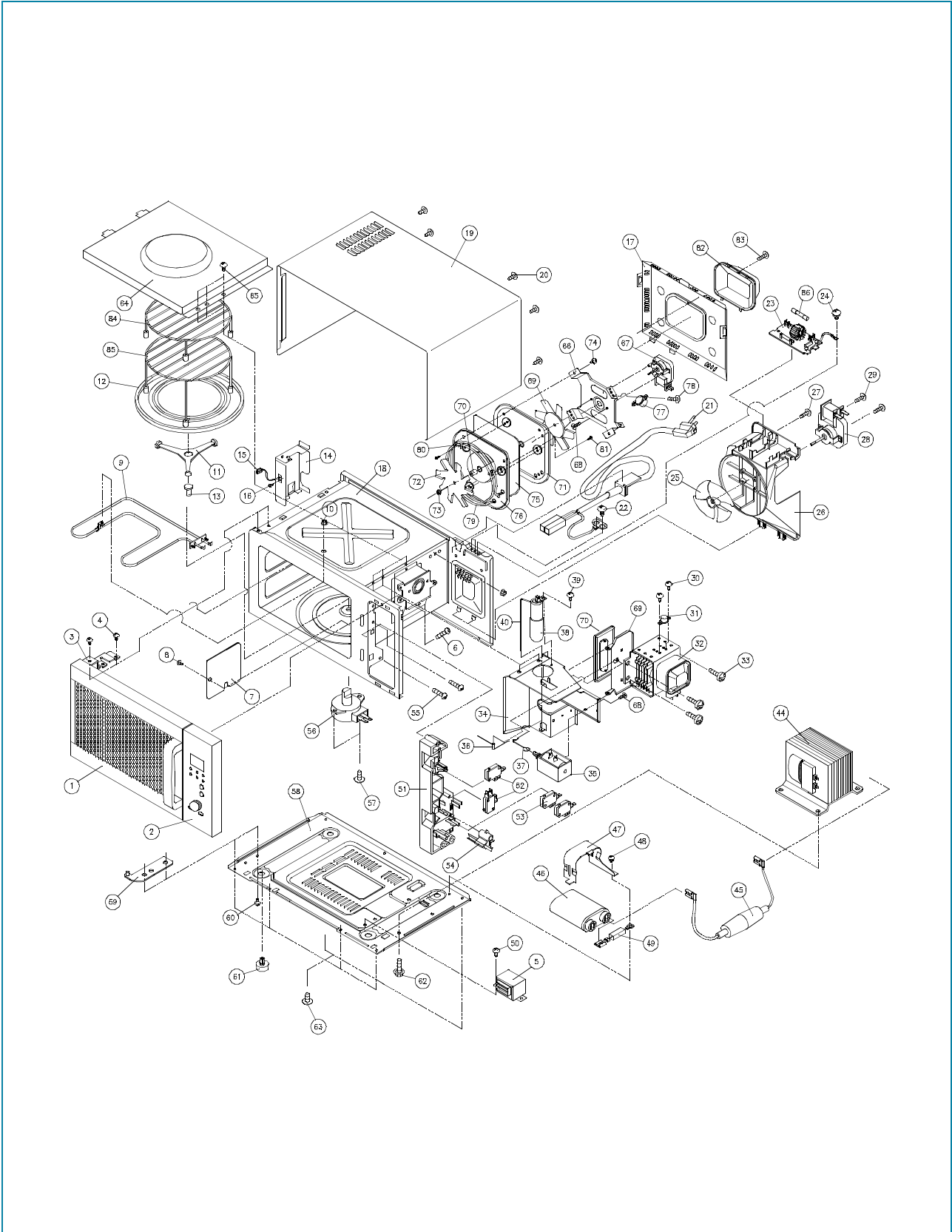
CONDITION

- | | | | |
|-----------------|-----------------------|-------------|--------------------|
| 1.DOOR : CLOSED | OL : OVEN LAMP | RD : RED | GN : GREEN |
| 2.COOK : OFF | FM : FAN MOTOR | WH : WHITE | GE : GREEN /YELLOW |
| | TM : TURNABLE MOTOR | BK : BLACK | |
| | RM : ROTISSERIE MOTOR | YW : YELLOW | BL : BLUE |
| | | OR : ORANGE | BR : BROWN |
- [A] : ROTISSERIE OPTION ONLY

EXPLODED VIEW AND PARTS LIST

1. KOC-995T0S

1) EXPLODED VIEW



EXPLODED VIEW AND PARTS LIST

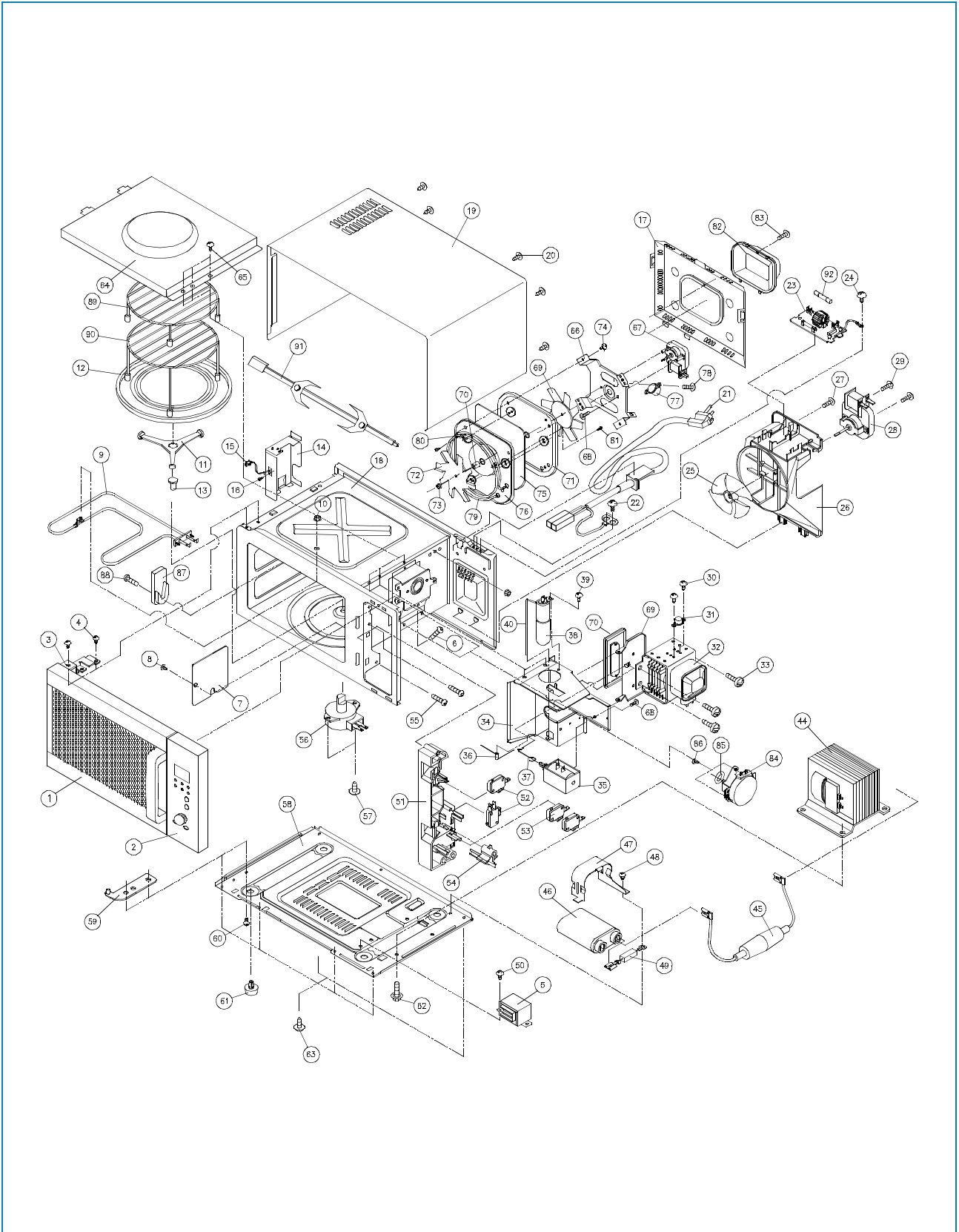
2) PARTS LIST

REF NO.	PART CODE	PARE NAME	DESCRIPTION	QTY
1	3511712000	DOOR ASSY	KOC-995T0S	1
2	3516715310	CONTROL PANEL ASSY	KOC-995T0S	1
3	3515200810	STOPPER Hinge *T	P/O T 2.6	1
4	7272400811	SCREW TAPTITE	TT3 TRS 4x8 MFZN	2
5	5EPV048355	TRANS POWER	DMR-881FS	1
6	7122401211	SCREW TAPPING	T2S TRS 4x12 MFZN	1
7	3511401601	COVER WAVE GUIDE	MICA 0.35T	1
8	7113400814	SCREW TAPPING	T1 BIN 4x8 MFNI	1
9	3512800700	HEATER	IR27835 230V 1350W	1
10	7S627W50X1	NUT HEX	NUT FLANGE M5x0.8P MFZN	2
11	3512510200	GUIDE ROLLER ASSY	KOC-961COS	1
12	3517202500	TRAY METAL	SPP T0.8	1
13	3517400111	COUPLER	TEFLON	1
14	3512505500	GUIDE AIR OULET	SA1D-80 0.5T	1
15	3514801000	SENSOR TEMPERATURE	PTM-K312-D6	1
16	7113400814	SCREW TAPPING	T1 BIN 4x8 MFNI	1
17	3511401310	COVER INSULATOR *B	SBHG-1 0.6T	1
18	3516107310	CAVITY WELD ASSY	KOC-995T0S	1
19	3510801000	CABINET	P.C.M T 0.6	1
20	7113401011	SCREW TAPPING	T1 TRS 4x10 MFZN	5
21	35113A5Q5J	CORD POWER ASSY	3x1.5 (KOC-970T1S)	1
22	7112401011	SCREW TAPPING	T1 TRS 4x10 MFZN	2
23	3518605001	NOISE FILTER	DWLF-MO5	1
24	7122401211	SCREW TAPPING	T2S TRS 4x12 MFZN	1
25	3511800100	FAN	P.P GF20	1
26	3512515300	GUIDE WIND	P.P	1
27	7621401211	SCREW TAPPING	T2S PAN 4x12 PW MFZN	1
28	3963513000	MOTOR SHADE POLE	OEM-15DWC2-A03	1
29	7121403011	SCREW TAPPING	T2S PAN 4x30 MFZN	2
30	7121300611	SCREW TAPPING	T2S PAN 3x6 MFZN	2
31	3518903500	MAGNETRON THERMOSTAT	OFF:150 ON:60 H#187	1
32	3518000801	MAGNETRON	2M218J(ME) I	1
33	3516003800	SPECIAL SCREW	T2 FLANGE 5x8 MFZN	3
34	3512505800	GUIDE AIR WELD ASSY	KOC-961C0S	1
35	3519000100	SOLENOID DC	DET-SL-067 DC12V	1
36	3515101000	SPRING DAMPER	HSWR	1
37	3513700300	LEVER DAMPER	SUS 304 HAD:0.8	1
38	3513601000	LAMP	BM 240V 25W T25 C7A V187	1
39	7112401011	SCREW TAPPING	T1 TRS 4x10 MFZN	1
40	441Z724041	SHAFT DAMPER	SWRM	1
41	7142400611	SCREW TAPPING	T2 TRS 4x6 MFZN	1
42	3515400200	VALVE DAMPER	SBHG-1 T0.5	1

EXPLODED VIEW AND PARTS LIST

REF NO.	PART CODE	PARE NAME	DESCRIPTION	QTY
43	3517501000	PROTECTOR DAMPER	SILICON RUBBER	1
44	3518116200	H.V. TRANSFORMER	JY-N 10S0-96T	1
45	3518701400	FUSE H.V.	HV41A70 03	1
46	3518302300	CAPACITOR H.V.	2100V AC 1.1MICRO F	1
47	441X304112	HOLDER H.V. CAPACITOR	SECC 0.8T	1
48	7272400811	SCREW TAPTITE	TT3 TRS 4x8 MFZN	1
49	3518400400	DIODE H.V.	HVR-1x3AB	1
50	7121400811	SCREW TAPTITE	T2S PAN 4x8 MFZN	1
51	3513813500	LOCK	POM BLACK	1
52	4415A17352	SW MICRO	VP-533-OF	3
53	4415A66910	SW MICRO	VP-531A-OF(MONITOR)	1
54	3513702600	LEVER LOCK	POM	1
55	7122401211	SCREW TAPPING	T2S TRS 4x12 MFZN	2
56	3966030600	MOTOR SYNCRO	220/240V 2.5W	1
57	7122400611	SCREW TAPPING	T2S TRS 4x6 MFZN	2
58	3510306600	BASE	SBHG 0.8T	1
59	3515202200	STOPPER HINGE *U	SCP-1 T 3.2	1
60	7272400811	SCREW TAPTITE	TT3 TRS 4x8 MFZN	1
61	3512101400	FOOT	DASF-310	4
62	3516003800	SCREW SPECIAL	T2 FLANGE 5x8 MFZN	4
63	7112401011	SCREW TAPPING	T1 TRS 4x10 MFZN	6
64	3511401900	COVER INSULATOR *T ASSY	KOC-991C0S	1
65	7112401011	SCREW TAPPING	T1 TRS 4x8 MFZN	3
66	3510601500	BRACKET MOTOR SHADED	SBHG-1 T0.8	1
67	3963513700	MOTOR SHADED POLE	OEM-10DWC2-C07	1
68	7051400811	SCREW MACHINE	PAN 4x8 SW MFZN	2
69	441B629071	FAN	SA1D-80 T0.5	1
70	3514400410	PIPE	A1100BR	1
71	3511404000	COVER INSULATOR	SA1D-80 T0.7	1
72	3511800400	FAN CONVECTION	SA1D-80 T0.5	1
73	75627W40X1	SPECIAL SCREW	NUT FLANGE M4 MFZN	1
74	7S312X4081	SCREW TAPPING	T1 TRS 4x8 SE MFZN	4
75	3513301600	INSULATOR *B	CERAMIC BLANKET T0.6	1
76	3511404100	COVER REFLECTOR	SA1D-80 T0.7	1
77	3518903800	THERMOSTAT	OFF:160 ON:115 V#187	1
78	7121400811	SCREW TAPPING	T2S PAN 4x8 MFZN	1
79	3512801800	HEATER	230V 1400W 1R18344	1
80	3513002300	HOLDER HEATER	SUS304 T0.5	3
81	7121400811	SCREW TAPPING	T2S PAN 4x8 MFZN	5
82	7112401011	SCREW TAPPING	T1 TRS 4x10 MFZN	4
83	3511402100	COVER *B	HEATPROOF PP	1
84	7112401011	SCREW TAPPING	T1 TRS 4x10 MFZN	1
85	3517202601	TRAY RACK ASSY	KOC-961C0S 27MM	1
86	3517202611	TRAY RACK ASSY	KOC-961C0S 117MM	1
87	4417B67600	FUSE	UL/FUSE NM15A 250V MF61	1

2. KOC-995T0S11
1) EXPLODED VIEW



2) PARTS LIST

REF NO.	PART CODE	PARE NAME	DESCRIPTION	QTY
1	3511712000	DOOR ASSY	KOC-995T0S	1
2	3516715310	CONTROL PANEL ASSY	KOC-995T0S	1
3	3515200810	STOPPER Hinge *T	P/O T 2.6	1
4	7272400811	SCREW TAPTITE	TT3 TRS 4×8 MFZN	2
5	5EPV048355	TRANS POWER	DMR-881FS	1
6	7122401211	SCREW TAPPING	T2S TRS 4×12 MFZN	1
7	3511401601	COVER WAVE GUIDE	MICA 0.35T	1
8	7113400814	SCREW TAPPING	T1 BIN 4×8 MFNI	1
9	3512800700	HEATER	IR27835 230V 1350W	1
10	7S627W50X1	NUT HEX	NUT FLANGE M5×0.8P MFZN	2
11	3512510200	GUIDE ROLLER ASSY	KOC-961COS	1
12	3517202500	TRAY METAL	SPP T0.8	1
13	3517400111	COUPLER	TEFLON	1
14	3512505500	GUIDE AIR OULET	SA1D-80 0.5T	1
15	3514801000	SENSOR TEMPERATURE	PTM-K312-D6	1
16	7113400814	SCREW TAPPING	T1 BIN 4×8 MFNI	1
17	3511401310	COVER INSULATOR *B	SBHG-1 0.6T	1
18	3516107310	CAVITY WELD ASSY	KOC-995T0S	1
19	3510801000	CABINET	P.C.M T 0.6	1
20	7113401011	SCREW TAPPING	T1 TRS 4×10 MFZN	5
21	35113A5Q5J	CORD POWER ASSY	3×1.5 (KOC-970T1S)	1
22	7112401011	SCREW TAPPING	T1 TRS 4×10 MFZN	2
23	3518605001	NOISE FILTER	DWLF-MO5	1
24	7122401211	SCREW TAPPING	T2S TRS 4×12 MFZN	1
25	3511800100	FAN	P.P GF20	1
26	3512515300	GUIDE WIND	P.P	1
27	7621401211	SCREW TAPPING	T2S PAN 4×12 PW MFZN	1
28	3963513000	MOTOR SHADE POLE	OEM-15DWC2-A03	1
29	7121403011	SCREW TAPPING	T2S PAN 4×30 MFZN	2
30	7121300611	SCREW TAPPING	T2S PAN 3×6 MFZN	2
31	3518903500	MAGNETRON THERMOSTAT	OFF:150 ON:60 H#187	1
32	3518000801	MAGNETRON	2M218J(ME) I	1
33	3516003800	SPECIAL SCREW	T2 FLANGE 5×8 MFZN	3
34	3512505800	GUIDE AIR WELD ASSY	KOC-961C0S	1
35	3519000100	SOLENOID DC	DET-SL-067 DC12V	1
36	3515101000	SPRING DAMPER	HSWR	1
37	3513700300	LEVER DAMPER	SUS 304 HAD:0.8	1
38	3513601000	LAMP	BM 240V 25W T25 C7A V187	1
39	7112401011	SCREW TAPPING	T1 TRS 4×10 MFZN	1
40	441Z724041	SHAFT DAMPER	SWRM	1
41	7142400611	SCREW TAPPING	T2 TRS 4×6 MFZN	1
42	3515400200	VALVE DAMPER	SBHG-1 T0.5	1
43	3517501000	PROTECTOR DAMPER	SILICON RUBBER	1
44	3518116200	H.V. TRANSFORMER	JY-N 10S0-96T	1
45	3518701400	FUSE H.V.	HV41A70 03	1

EXPLODED VIEW AND PARTS LIST

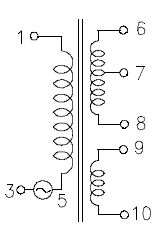
REF NO.	PART CODE	PARE NAME	DESCRIPTION	QTY
46	3518302300	CAPACITOR H.V.	2100V AC 1.1MICRO F	1
47	441X304112	HOLDER H.V. CAPACITOR	SECC 0.8T	1
48	7272400811	SCREW TAPTITE	TT3 TRS 4×8 MFZN	1
49	3518400400	DIODE H.V.	HVR-1×3AB	1
50	7121400811	SCREW TAPTITE	T2S PAN 4×8 MFZN	1
51	3513813500	LOCK	POM BLACK	1
52	4415A17352	SW MICRO	VP-533-OF	3
53	4415A66910	SW MICRO	VP-531A-OF(MONITOR)	1
54	3513702600	LEVER LOCK	POM	1
55	7122401211	SCREW TAPPING	T2S TRS 4×12 MFZN	2
56	3966030600	MOTOR SYNCRO	220/240V 2.5W	1
57	7122400611	SCREW TAPPING	T2S TRS 4×6 MFZN	2
58	3510306600	BASE	SBHG 0.8T	1
59	3515202200	STOPPER HINGE *U	SCP-1 T 3.2	1
60	7272400811	SCREW TAPTITE	TT3 TRS 4×8 MFZN	1
61	3512101400	FOOT	DASF-310	4
62	3516003800	SCREW SPECIAL	T2 FLANGE 5×8 MFZN	4
63	7112401011	SCREW TAPPING	T1 TRS 4×10 MFZN	6
64	3511401900	COVER INSULATOR *T ASSY	KOC-991C0S	1
65	7112401011	SCREW TAPPING	T1 TRS 4×8 MFZN	3
66	3510601500	BRACKET MOTOR SHADED	SBHG-1 T0.8	1
67	3963513700	MOTOR SHADED POLE	OEM-10DWC2-C07	1
68	7051400811	SCREW MACHINE	PAN 4×8 SW MFZN	2
69	441B629071	FAN	SA1D-80 T0.5	1
70	3514400410	PIPE	A1100BR	1
71	3511404000	COVER INSULATOR	SA1D-80 T0.7	1
72	3511800400	FAN CONVECTION	SA1D-80 T0.5	1
73	75627W40X1	SPECIAL SCREW	NUT FLANGE M4 MFZN	1
74	7S312X4081	SCREW TAPPING	T1 TRS 4×8 SE MFZN	4
75	3513301600	INSULATOR *B	CERAMIC BLANKET T0.6	1
76	3511404100	COVER REFLECTOR	SA1D-80 T0.7	1
77	3518903800	THERMOSTAT	OFF:160 ON:115 V#187	1
78	7121400811	SCREW TAPPING	T2S PAN 4×8 MFZN	1
79	3512801800	HEATER	230V 1400W 1R18344	1
80	3513002300	HOLDER HEATER	SUS304 T0.5	3
81	7121400811	SCREW TAPPING	T2S PAN 4×8 MFZN	5
82	7112401011	SCREW TAPPING	T1 TRS 4×10 MFZN	4
83	3511402100	COVER *B	HEATPROOF PP	1
84	7112401011	SCREW TAPPING	T1 TRS 4×10 MFZN	1
85	441BE15202	MOTOR SYNCHRONOUS	GM-20-24FDB1-2(OPTION)	1
86	3512300301	GASKET	(BARBECUE OPTION)	1
87	7113400814	SCREW TAPPING	T1 BIN 4×8 MFNI	2
88	3512506700	GUIDE ROTARY	TEFLON(OPTION)	1
89	7122401211	SCREW TAPPING	T2S TRS 4×12 MFZN	1
90	3517202601	TRAY RACK ASSY	KOC-961C0S 27MM	1
91	3517202611	TRAY RACK ASSY	KOC-961C0S 117MM	1
92	3517604300	UTENSIL BAR ASSY	(BARBECUE OPTION)	1
93	4417B67600	FUSE	UL/FUSE NM15A 250V MF61	1

PRINTED WIRING BOARD

1. CIRCUIT CHECK PROCEDURE

1. Low Voltage Transformer check

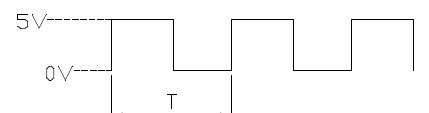
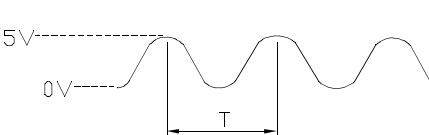
- 1) The low voltage transformer is located on the Base.
- 2) Measuring condition (input voltage) : 230 VAC / 50 Hz

KOC-995T 0S/KOC-995T0S11		
LVT : DMR-881FS1		
	Terminal	Voltage
	1 3	230VAC/50Hz
	6 - 7	14.0 VAC
	7 - 8	14.0 VAC
	9 10	2.0 VAC

- Secondary side voltage of the low voltage transformer changes in proportion to fluctuation of power source voltage.
- The allowable tolerance of the secondary voltage is within $\pm 5\%$ of normal voltage.

2. Voltage check

- Key check point (1~5: Micom Pin, 6: Display Pin)

NO	CHECK POINT	REMARK
1	PIN 63, 64	+5 VDC $\pm 5\%$
2	PIN 29, 32, 62	0 V
3	PIN 28	+5 VDC
4	PIN 45	 T : 20ms (50Hz)
5	PIN 30, 31	 T : 0.25us (4.0MHz)
6	PIN 1, 25	2.0 VAC (Display filament voltage)

- Check method

NO	VOLTAGE	KOC-995T 0S/KOC-995T0S11
1	+5 VDC	Replace R24, R15, R25, ZD3, EC2, Q3, C10, C11, C12
2	+12 VDC	Replace D4, D5, EC3, C16
3	+11.3 VDC	Replace R35, ZD4, Q11, EC6, C17
4	-24 VDC	Replace R34, ZD1, ZD5, D6, D7, EC4, EC5

PRINTED WIRING BOARD

NOTE

The marks of the above corresponding voltages (+5, +12, -24VDC) are written on the PCB .
Each measuring points must be measured with GND points.

3. Display Problems

NO	CAUSE	MEASUREMENT	RESULT	REMEDY
1	Poor contact between P.C.B. and display Filament	Check the voltage of display pin 1 & 25	2.0 VAC	Fix the pin 1 & 25 on the P.C.B.
2	The display has some Trouble in its segment or grid	Refer to The display trouble shooting data below		Replace P.C.B. assembly
3	Loss vacuum in the Display	Find white spot		Replace P.C.B. assembly

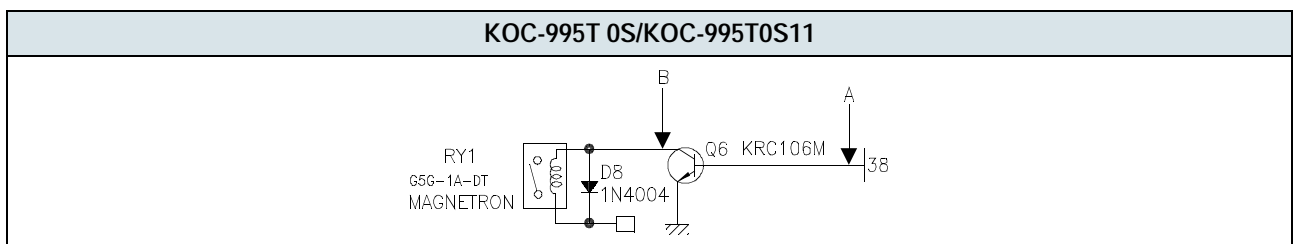
· The display trouble shooting data

TROUBLE	DISPLAY NAME & PIN NO.	MICOM OUTPUT IN PIN NO.
Grid 1 doesnt come on.	Grid 1 (G1), 4, 7	13
Grid 2 doesnt come on.	Grid 2 (G2), 10	16
Grid 3 doesnt come on.	Grid 3 (G3), 14	18
Grid 4 doesnt come on.	Grid 4 (G4), 17	17
Grid 5 doesnt come on.	Grid 5 (G5), 21	24
Segment a doesnt come on from G1 to G5	Segment a, 23	26
Segment b doesnt come on from G1 to G5	Segment b, 22	25
Segment c doesnt come on from G1 to G5	Segment c, 20	23
Segment d doesnt come on from G1 to G5	Segment d, 19	22
Segment e doesnt come on from G1 to G5	Segment e, 18	21
Segment f doesnt come on from G1 to G5	Segment f, 16	20
Segment g doesnt come on from G1 to G5	Segment g, 15	19
Segment h doesnt come on from G1 to G5	Lower bar h, 5	14
Segment i doesnt come on from G1 to G5	Upper bar i, 6,8,9,11	15

4. Case of no microwave oscillation

1) Situation : When touching M/W button, oven lamp turns on, fan motor and turntable motor rotate and cook indicator in the display comes on.

⇒ CAUSE : Relay 1 (RY1) does not operate.

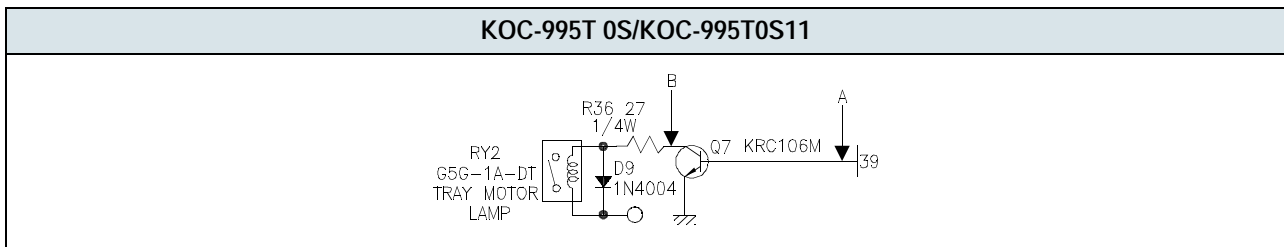


· Check method

STAGE	POINT A	POINT B
RELAY ON	+5 VDC	GND
RELAY OFF	GND	+12 VDC

2) Situation : When touching M/W button, oven lamp does not turn on, turntable motor and fan motor does not rotate but cook indicator in the display comes on.

⇒CAUSE : Relay 2 (RY2) does not operate.



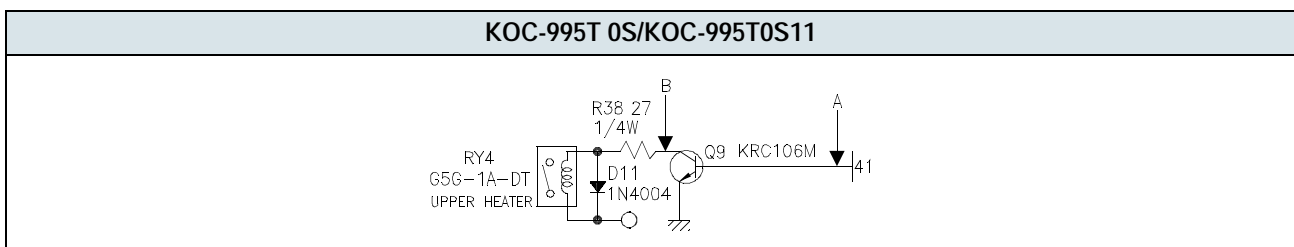
· Check method

STAGE	POINT A	POINT B
RELAY ON	+5 VDC	GND
RELAY OFF	GND	+12 VDC

5. Case of no heating of upper heater

- When touching GRILL button, oven lamp turns on, fan motor and turntable motor rotate and cook indicator in the display comes on without heating.

⇒CAUSE : Relay 4 (RY4) does not operate.

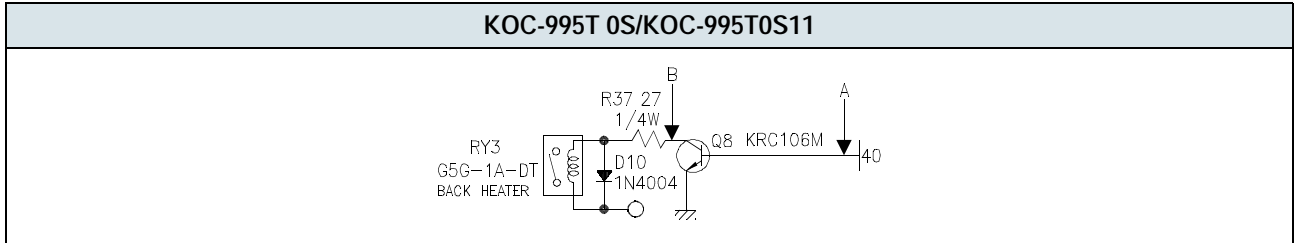


· Check method

STAGE	POINT A	POINT B
RELAY ON	+5 VDC	GND
RELAY OFF	GND	+12 VDC

6. Case of no heating of back heater

- When touching TEMP & COMBI button, oven lamp turns on, fan motor and turntable motor rotate and cook indicator in the display comes on without heating.
- ⇒CAUSE : Relay 3 (RY3) does not operate.

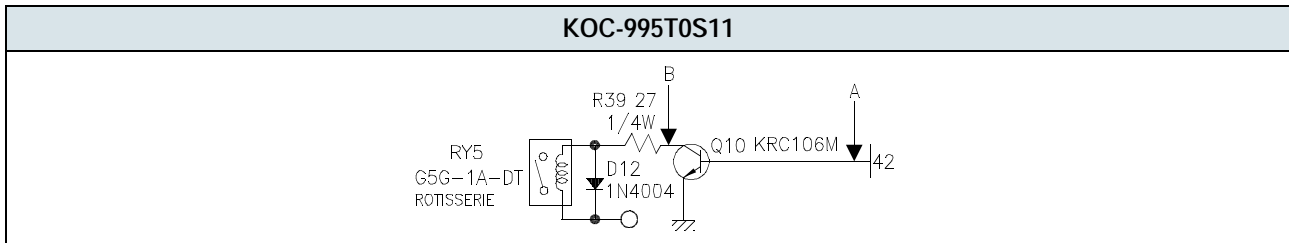


· Check method

STAGE	POINT A	POINT B
RELAY ON	+5 VDC	GND
RELAY OFF	GND	+12 VDC

7. Case of no rotating of rotisserie motor (KOC-995T0S11 Only)

- When touching ROTISSERIE button, oven lamp turns on, fan motor and turntable motor rotate and cook indicator in the display comes on without rotating.
- ⇒CAUSE : Relay 5 (RY5) does not operate.

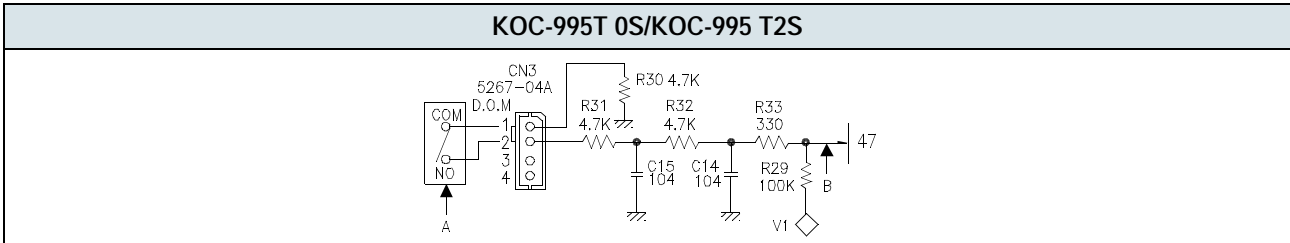


· Check method

STAGE	POINT A	POINT B
RELAY ON	+5 VDC	GND
RELAY OFF	GND	+12 VDC

8. Case of no stopping of the count down timer

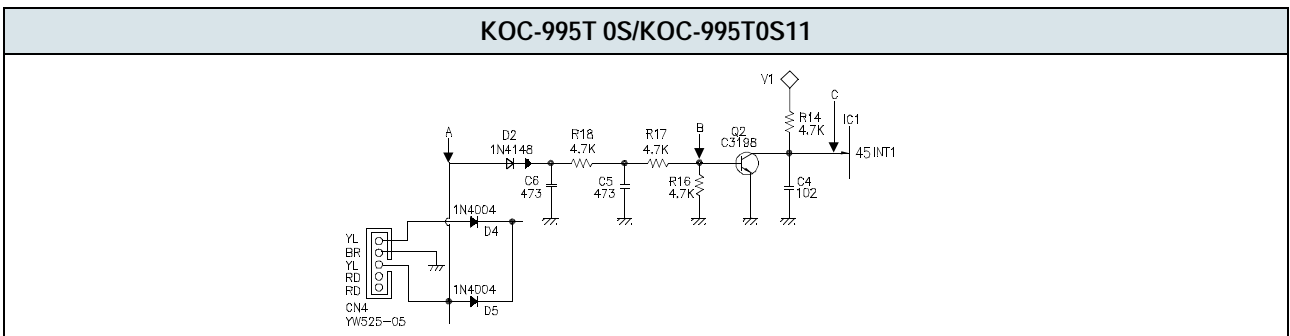
- When the door is opened during operation, the count down timer does not stop.



· Check method

STAGE	POINT A	POINT B
Door opened	Open	+5 VDC
Door closed	Closed	GND

9. Case of appearing Err6 on the display



· Check method

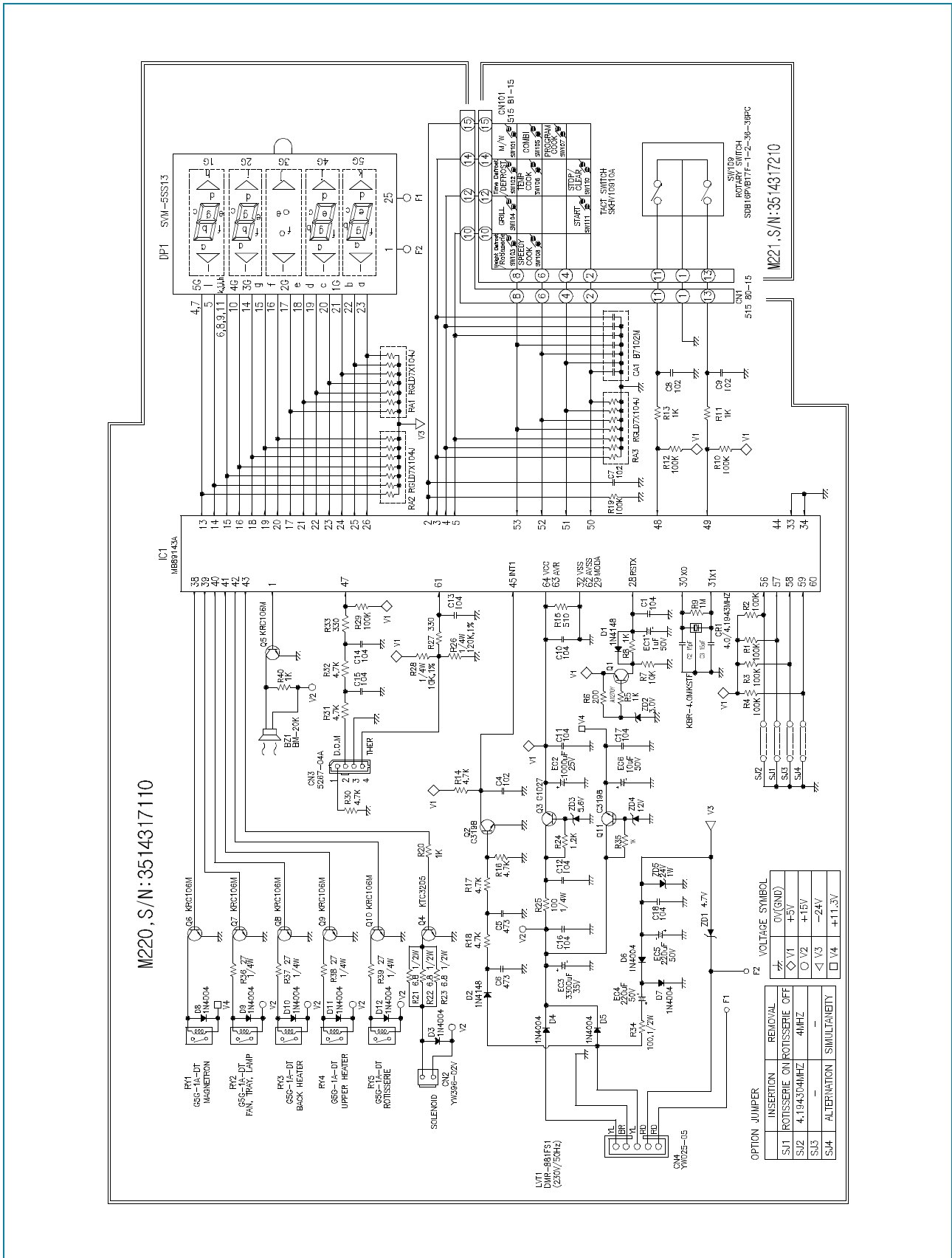
POINT	WAVEFORM
A	
B	
C	T : 20ms (50Hz)

NOTE

If clock does not keep exact time, you must check Diode D2 & Transistor Q2 (KOC-995T0S/995T2S),

P.C.B. CIRCUIT DIAGRAM

1. PCB CIRCUIT DIAGRAM



2. PCB ASSY PART LIST

1. KOC-995T0S

NAME	SYMBOL	SPECIFICATION	PART CODE	QTY
PCB	M220	93X197	3514317110	1
	M221	91.5X197	3514317210	1
BUZZER	BZ1	BM-20K	3515600100	1
CONNECTOR WAFER	CN1	515 80-15	4CW215SBD0	1
CONNECTOR WAFER	CN2	YW396-02V	3519150520	1
CONNECTOR WAFER	CN3	5267-04A	4076122040	1
CONNECTOR WAFER	CN4	YW025-05	4076131050	1
CONNECTOR WAFER	CN101	515 81-15	4CW215RBD0	1
DIGITRON	DP1	SVM-5SS13	DSVM5SS13-	1
HOLDER VFD	DPH	PP KOR-9930	3513002000	1
IC MICOM	IC1	MB89143AP-251	141SC995T0	1
SW RELAY	RY1-RY4	G5G-1A-DT DC 12V	5SC0101123	4
RESONATOR CERA	CR1	KBR-4.0MKSTF	5PKBR40MKS	1
C ELECTRO	EC1	RS 50V 1UF	CEXE1H109A	1
C ELECTRO	EC2	RSS 25V 1000 UF	CEXF1E102V	1
C ELECTRO	EC3	RSS 35V 3300 UF	CEXF1V332V	1
C ELECTRO	EC4,EC5	RSS 50V 220 UF	CEXF1H221V	2
C ELECTRO	EC6	RS 50V 10 UF	CEXE1H100A	1
TRANSISTOR	Q1	KTA1270Y	TZTA1270Y-	1
TRANSISTOR	Q2, Q11	KTC3198GR	TZTC3198GR	2
TRANSISTOR	Q3	KTC1027Y	TZTC1027Y-	1
TRANSISTOR	Q4	KTC3205	TZTC3205Y-	1
TRANSISTOR	Q5-Q9	KRC106M	TZRC106M--	5
C CERA AXIAL	C1,C10-C18	H1KF 50V 0.1UF Z	CCZF1H104Z	10
C CERA AXIAL	C5,C6	H1KF 50V 0.047UF Z	CCZF1H473Z	2
C CERA AXIAL	C4,C7-C9	H1KF 50V 1000PF K	CCZF1H102Z	4
C ARRAY	CA1	8P(7) 50V 1000 PF	CN7XB-102M	1
DIODE SWITCHING	D1,D2	1N4148	DZN4148---	2
DIODE RECTIFIER	D3D11	1N4004A	DZN4004A--	9
R CABON FILM	R1-R4,R10,R12,R19,R29	1/6W, 100K OHM J	RD-AZ104J-	8
R CABON FILM	R5,R8,R11,R13,R20, R35,R40	1/6W, 1K OHM J	RD-AZ102J-	7
R CABON FILM	R6	1/6W, 200 OHM J	RD-AZ201J-	1
R CABON FILM	R7	1/6W, 10K OHM J	RD-AZ103J-	1

P.C.B. CIRCUIT DIAGRAM

NAME	SYMBOL	SPECIFICATION	PART CODE	QTY
R CABON FILM	R9	1/6W, 1M OHM J	RD-AZ105J-	1
R CABON FILM	R14,R16~R18,R30~R32	1/6W, 4.7K OHM J	RD-AZ472J-	7
R CABON FILM	R15	1/6W, 510 OHM J	RD-AZ511J-	1
R CABON FILM	R21~R23	1/2W, 6.8 OHM J S	RD-2Z689J-	3
R CABON FILM	R24	1/6W, 1.2K OHM J	RD-AZ122J-	1
R CABON FILM	R25	1/4W, 100 OHM J	RD-4K101J-	1
R CABON FILM	R26	1/4W, 120K OHM F	RN-4Z1203F	1
R CABON FILM	R27,R33	1/6W, 330 OHM J	RD-AZ331J-	2
R CABON FILM	R28	1/4W, 10K OHM F	RN-4Z1002F	1
R CABON FILM	R34	1/2W, 100 OHM J S	RD-2Z101JS	1
R CABON FILM	R36~R38	1/4W, 27 OHM J	RD-4Z270J-	3
R ARRAY	RA1,RA2,RA3	8P(7) 1/8 100K J	RA-88X104J	3
DIODE ZENER	ZD1	MTZ J 4.7B	DZUZ4R7BSB	1
DIODE ZENER	ZD2	MTZ J 3.0B	DZUZ3R0BSB	1
DIODE ZENER	ZD3	MTZ J 5.6B	DZUZ5R6BSB	1
DIODE ZENER	ZD4	MTZ J 12C	DZUZ12BSC-	1
DIODE ZENER	ZD5	MTZ J 24VB, 1W	DZZP24B---	1
SW ROTARY	SW109	SDB161PVB17F-1-	5S10109002	1
WIRE FLAT	WF1	1.25X15X90XC	WSJ-159007	1
SW TACT	SW101-SW108,SW110,SW111	SKHV10910A	5S50101Z90	10
JUMPER WIRE(7.5mm)	J2~J4,J6,J7,J12~J14	1/0.52 TIN COATING	85801052GY	8
JUMPER WIRE(10mm)	J5,J8,J9,J101,J102	1/0.52 TIN COATING	85801052GY	5
JUMPER WIRE(12.5mm)	J1	1/0.52 TIN COATING	85801052GY	1
JUMPER WIRE(15mm)	J10,J11,J103	1/0.52 TIN COATING	85801052GY	3

2. KOC-995T0S11

NAME	SYMBOL	SPECIFICATION	PART CODE	QTY
PCB	M220	93X197	3514317110	1
	M221	91.5X197	3514317210	1
BUZZER	BZ1	BM-20K	3515600100	1
CONNECTOR WAFER	CN1	515 80-15	4CW215SBD0	1
CONNECTOR WAFER	CN2	YW396-02V	3519150520	1
CONNECTOR WAFER	CN3	5267-04A	4076122040	1
CONNECTOR WAFER	CN4	YW025-05	4076131050	1
CONNECTOR WAFER	CN101	515 81-15	4CW215RBD0	1
DIGITRON	DP1	SVM-5SS13	DSVM5SS13-	1
HOLDER VFD	DPH	PP KOR-9930	3513002000	1
IC MICOM	IC1	MB89143AP-251	141SC995T0	1
SW RELAY	RY1-RY5	G5G-1A-DT DC 12V	5SC0101123	5
RESONATOR CERA	CR1	KBR-4.0MKSTF	5PKBR40MKS	1
C ELECTRO	EC1	RS 50V 1UF	CEXE1H109A	1
C ELECTRO	EC2	RSS 25V 1000 UF	CEXF1E102V	1
C ELECTRO	EC3	RSS 35V 3300 UF	CEXF1V332V	1
C ELECTRO	EC4,EC5	RSS 50V 220 UF	CEXF1H221V	2
C ELECTRO	EC6	RS 50V 10 UF	CEXE1H100A	1
TRANSISTOR	Q1	KTA1270Y	TZTA1270Y-	1
TRANSISTOR	Q2, Q11	KTC3198GR	TZTC3198GR	2
TRANSISTOR	Q3	KTC1027Y	TZTC1027Y-	1
TRANSISTOR	Q4	KTC3205	TZTC3205Y-	1
TRANSISTOR	Q5-Q10	KRC106M	TZRC106M--	6
C CERA AXIAL	C1,C10-C18	H1KF 50V 0.1UF Z	CCZF1H104Z	10
C CERA AXIAL	C5,C6	H1KF 50V 0.047UF Z	CCZF1H473Z	2
C CERA AXIAL	C4,C7-C9	H1KF 50V 1000PF K	CCZF1H102Z	4
C ARRAY	CA1	8P(7) 50V 1000 PF	CN7XB-102M	1
DIODE SWITCHING	D1,D2	1N4148	DZN4148---	2
DIODE RECTIFIER	D3D12	1N4004A	DZN4004A--	10
R CABON FILM	R1-R4,R10,R12,R19,R29	1/6W, 100K OHM J	RD-AZ104J-	8
R CABON FILM	R5,R8,R11,R13,R20, R35,R40	1/6W, 1K OHM J	RD-AZ102J-	7
R CABON FILM	R6	1/6W, 200 OHM J	RD-AZ201J-	1
R CABON FILM	R7	1/6W, 10K OHM J	RD-AZ103J-	1
R CABON FILM	R9	1/6W, 1M OHM J	RD-AZ105J-	1

P.C.B. CIRCUIT DIAGRAM

NAME	SYMBOL	SPECIFICATION	PART CODE	QTY
R CABON FILM	R14,R16~R18,R30~R32	1/6W, 4.7K OHM J	RD-AZ472J-	7
R CABON FILM	R15	1/6W, 510 OHM J	RD-AZ511J-	1
R CABON FILM	R21~R23	1/2W, 6.8 OHM J S	RD-2Z689J-	3
R CABON FILM	R24	1/6W, 1.2K OHM J	RD-AZ122J-	1
R CABON FILM	R25	1/4W, 100 OHM J	RD-4K101J-	1
R CABON FILM	R26	1/4W, 120K OHM F	RN-4Z1203F	1
R CABON FILM	R27,R33	1/6W, 330 OHM J	RD-AZ331J-	2
R CABON FILM	R28	1/4W, 10K OHM F	RN-4Z1002F	1
R CABON FILM	R34	1/2W, 100 OHM J S	RD-2Z101JS	1
R CABON FILM	R36~R39	1/4W, 27 OHM J	RD-4Z270J-	4
R ARRAY	RA1,RA2,RA3	8P(7) 1/8 100K J	RA-88X104J	3
DIODE ZENER	ZD1	MTZ J 4.7B	DZUZ4R7BSB	1
DIODE ZENER	ZD2	MTZ J 3.0B	DZUZ3R0BSB	1
DIODE ZENER	ZD3	MTZ J 5.6B	DZUZ5R6BSB	1
DIODE ZENER	ZD4	MTZ J 12C	DZUZ12BSC-	1
DIODE ZENER	ZD5	MTZ J 24VB, 1W	DZZP24B---	1
SW ROTARY	SW109	SDB161PVB17F-1-	5S10109002	1
WIRE FLAT	WF1	1.25X15X90XC	WSJ-159007	1
SW TACT	SW101-SW108,SW110,SW111	SKHV10910A	5S50101Z90	10
JUMPER WIRE(7.5mm)	J2~J4,J6,J7,J12~J14	1/0.52 TIN COATING	85801052GY	8
JUMPER WIRE(10mm)	J5,J8,J9,J101,J102	1/0.52 TIN COATING	85801052GY	5
JUMPER WIRE(12.5mm)	J1	1/0.52 TIN COATING	85801052GY	1
JUMPER WIRE(15mm)	J10,J11,J103	1/0.52 TIN COATING	85801052GY	3
JUMPER WIRE(7.5mm)	SJ1	1/0.52 TIN COATING	85801052GY	1

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