

Service Manual

Microwave Oven

Model : KOC-1B0K0S

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 CO., LTD.

[http : //svc.dwe.co.kr](http://svc.dwe.co.kr)

Nov. 2000

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.
- A microwave leakage check to verify compliance with the Federal performance standard should be performed on each oven prior to release to the owner.

TABLE OF CONTENTS

| | |
|---|----|
| 1. SAFETY AND PRECAUTIONS | 2 |
| 2. SPECIFICATIONS | 3 |
| 3. EXTERNAL VIEW | 3 |
| 3-1. OUTER DIMENSION | 3 |
| 3-2. FEATURE DIAGRAM | 4 |
| 4. INSTALLATION | 5 |
| 5. CONTROL PANEL | 6 |
| 6. DISASSEMBLY AND ASSEMBLY | 7 |
| 7. INTERLOCK MECHANISM AND ADJUSTMENT..... | 17 |
| 8. TROUBLE SHOOTING GUIDE | 18 |
| 9. MEASUREMENT AND TEST | 23 |
| 9-1. MEASUREMENT OF THE MICROWAVE OUTPUT..... | 23 |
| 9-2. MICROWAVE RADIATION TEST | 24 |
| 9-3. COMPONENT TEST PROCEDURE | 25 |
| 9-4. COMPONENT ACTION | 26 |
| 10. WIRING DIAGRAM | 27 |
| 11. EXPLODED VIEW AND PARTS LIST | 28 |
| 11-1. DOOR ASSEMBLY..... | 28 |
| 11-2. CONTROL PANEL ASSEMBLY..... | 28 |
| 11-3. TOTAL ASSEMBLY..... | 28 |
| 12. PRINTED CIRCUIT BOARD | 32 |
| 13. P.C.B. CIRCUIT DIAGRAM | 36 |

1. SAFETY AND PRECAUTIONS

1. For Safe Operation

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

IF ANY OF THE FOLLOWING CONDITIONS EXIST, OPERATOR MUST NOT USE THE APPLIANCE. (Only a trained service personnel should make repairs.)

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

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

No grease, soil or spatter should be allowed to build up on these surfaces or inside the oven. DO NOT ATTEMPT TO OPERATE THIS APPLIANCE WITH THE DOOR OPEN. The microwave oven has concealed switches to make sure the power is turned off when the door is opened. Do not attempt to defeat them.

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

2. For Safe Service Procedures.

- 1) If the oven is operative prior to servicing, a microwave emission check should be performed prior to servicing the oven.
- 2) If any certified oven unit is found to servicing, a microwave emission check should be performed prior to servicing the oven.
 - (a) inform the manufacturer, importer or assembler,
 - (b) repair the unit at no cost to the owner,
 - (c) attempt to ascertain the cause of the excessive leakage,
 - (d) tell the owner of the unit not to use the unit until the oven has been brought into compliance.
- 3) If the oven operates with the door open, the service person should tell the user not to operate the oven and contact the manufacturer 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' or by earth symbol or 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.

2. SPECIFICATIONS

| | | |
|--------------------------------|-------------|--|
| MODEL | | KOC-1B0K |
| POWER SUPPLY | | 230V~50Hz, SINGLE PHASE WITH EARTHING |
| POWER CONSUMPTION | MICROWAVE | 1500W |
| | GRILL | 1600W |
| | CONVECTION | 2300W |
| | COMBINATION | 3100W |
| MICROWAVE ENERGY OUTPUT | | 1000W (IEC705) |
| MICROWAVE FREQUENCY | | 2450MHz |
| OUTSIDE DIMENSIONS (W X H X D) | | 560 x 344 x 542 mm (22.0 x 13.5 x 21.3 in.) |
| CAVITY DIMENSIONS (W X H X D) | | 368.5 x 246 x 376.5 mm (14.5 x 9.7 x 14.8 in.) |
| NET WEIGHT | | APPROX. 21.5 Kg (47.6 lbs.) |
| TIMER | | 60 minutes |
| FUNCTION SELECTIONS | | MICROWAVE/ GRILL/ CONVECTION/ COMBINATION |
| POWER SELECTIONS | | 10 LEVELS |
| CAVITY VOLUME | | 1.2 Cu.Ft. |

- SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

3. EXTERNAL VIEW

3-1. OUTER DIMENSION

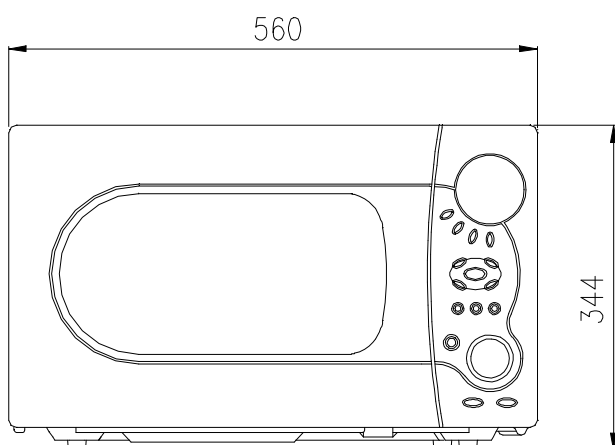


Fig. 1 Front view

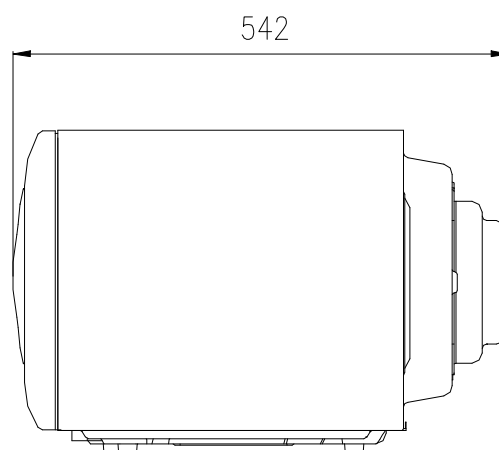
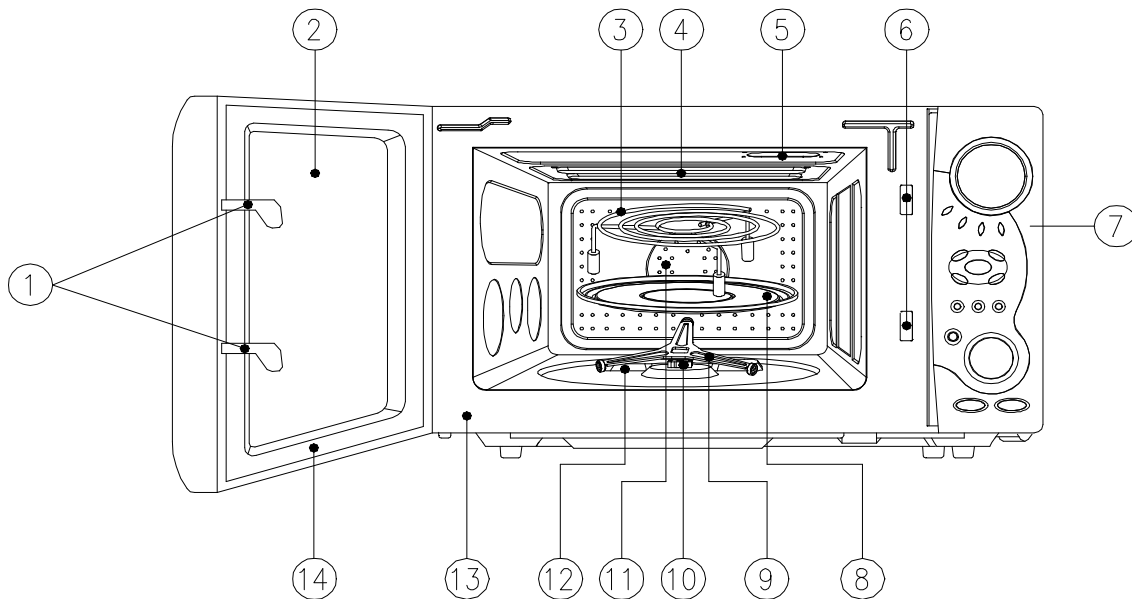


Fig. 2 Side view

3-2. FEATURE DIAGRAM



- 1. 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.
- 2. Door viewing screen** – Allows viewing of food. The screen is designed so that light can pass through, but not the microwave.
- 3. Metal rack**
- 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. Roller guide** – This must always be used for cooking together with the turntable tray.
- 10. Coupler** – This fits over the shaft in the center of the ovens cavity floor. This is to remain in the oven for all cooking.
- 11. Convection outlet & fan**
- 12. Under heater**
- 13. Oven front plate**
- 14. Door seal** – Door seal maintains the microwave energy within the oven cavity and prevents microwave leakage.

4. 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 12(8)amperes, 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.

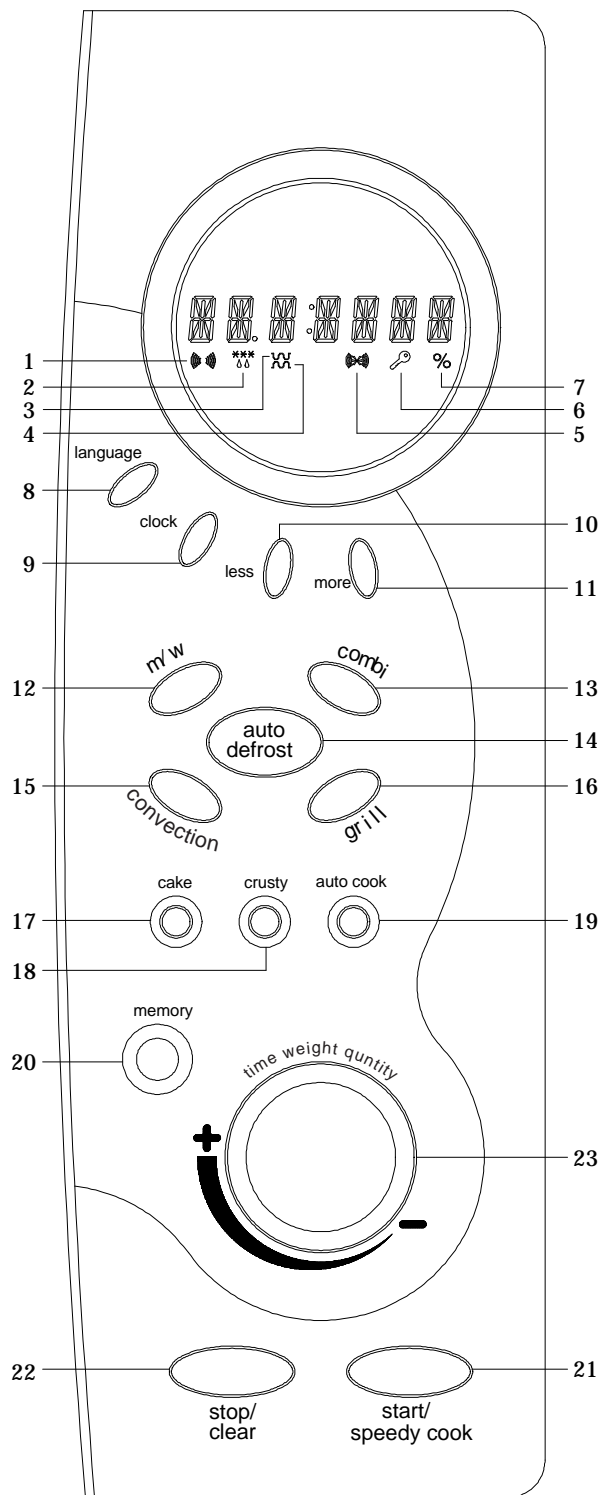
(This may occur during delivery in cold weather.) Allow the oven to become room temperature before operating.

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.

5. CONTROL PANEL



DISPLAY WINDOW

1. **MICROWAVE** indicator, showing microwaving in progress.
2. **DEFROST** indicator, showing defrosting in progress.
3. **GRILL** (upper grill heater) indicator, showing grilling in progress.
4. **GRILL** (lower grill heater) indicator, showing grilling in progress.
5. **CONVECTION** indicator, showing convectioning in progress.
6. **CHILD LOCK** indicator.
7. **%** percentage microwave power level indicator.

BUTTONS

8. **language** : Press to select the language.
9. **clock** : Use to set clock.
10. **less** : Use to remove time from cooking.
11. **more** : Use to add time to cooking.
12. **m/w** : Press to select microwave power level.
13. **combi** : Press to select combi cooking mode.
14. **auto defrost** : Press to select defrost menu.
15. **convection** : Press to select convection temperature.
16. **grill** : Press to select grill.
17. **cake** : Press to select cake menu.
18. **crusty** : Press to select crusty menu.
19. **auto cook** : Press to select auto cook menu.
20. **memory** : Use to set favorite cooking mode.
21. **start/speedy cook** : Press to start a programme, also for speedy start (each press adds 30 seconds microwave cooking time).
22. **stop/clear** : Press once to stop a programme, and twice to cancel a programme.
23. **dial knob** : Use to set time, weight and quantity.

6. 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 ware rubber gloves when servicing the high voltage side.
3. Discharge the high voltage capacitor before touching any oven components or wiring.

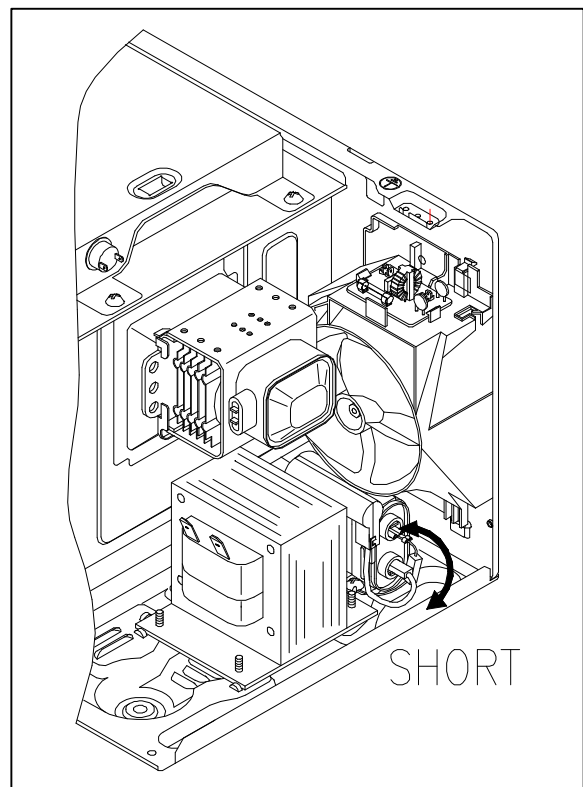
1) Check the earthed.

Do not operate on a two-wire extension cord. The microwave oven is designed to be used with earthed. It is imperative, therefore, to makes 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.



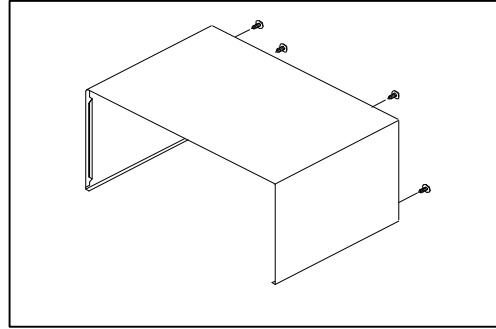
CAUTION : Service personnel should remove their watches whenever working close to or replacing the magnetron.

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.

✓ **Caution:** In this Service 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>)

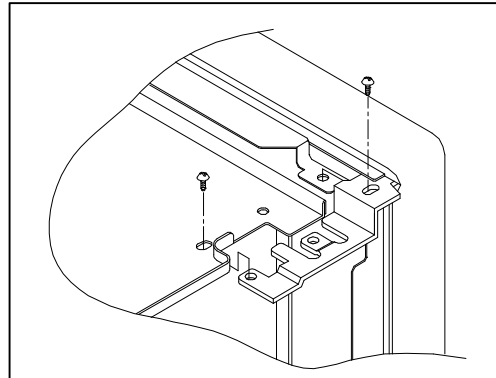
1. To remove cabinet

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



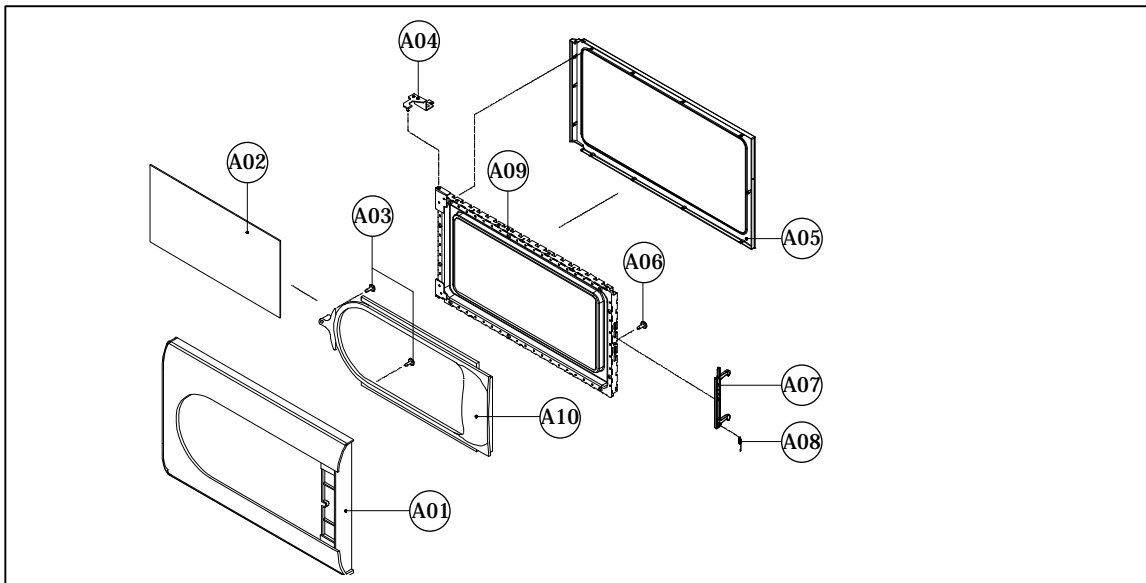
2. To remove door assembly

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



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

3. To remove door parts.



| REF.NO | PART CODE | PART NAME | DESCRIPTION | Q'TY | REMARK |
|--------|------------|---------------------|-------------------|------|--------|
| A01 | 3512204700 | FRAME DOOR | PC | 1 | |
| A02 | 3517006900 | BARRIER-SCREEN*O | TEMP GLASS T3.2 | 1 | |
| A03 | 7112401011 | SCREW TAPPING | T1 TRS 4x10 MFZN | 2 | |
| A04 | 3515204900 | STOPPER HINGE *T AS | KOC-1B0K0S | 1 | |
| A05 | 3512302300 | GASKET DOOR | PBT | 1 | |
| A06 | 7122401211 | SCREW TAPPING | T2S TRS 4x12 MFZN | 1 | |
| A07 | 3513101200 | HOOK | POM | 1 | |
| A08 | 3515101800 | SPRING HOOK | PW1 | 1 | |
| A09 | 3511714100 | DOOR SEAL AS | KOC-1B0K0S | 1 | |
| A10 | 3512603500 | HANDLE DOOR | PC | 1 | |

- (1) Remove the gasket door from door plate.
- (2) Remove a screw from door plate.
- (3) Remove the door frame from door plate.
- (4) Remove the stopper hinge top from door plate.
- (5) Remove the spring and the hook.
- (6) Remove two screws from door frame.
- (7) Remove the handle door and barrier screen outer from door frame.
- (8) Remove the barrier screen outer from handle door.
- (9) Reverse the above steps for reassembly.

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

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

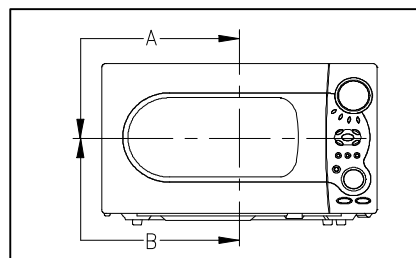
1) Loosen two screws on stopper hinge top, and then push the door to contact the door seal to oven front surface.

2) Tighten two screws.

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

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

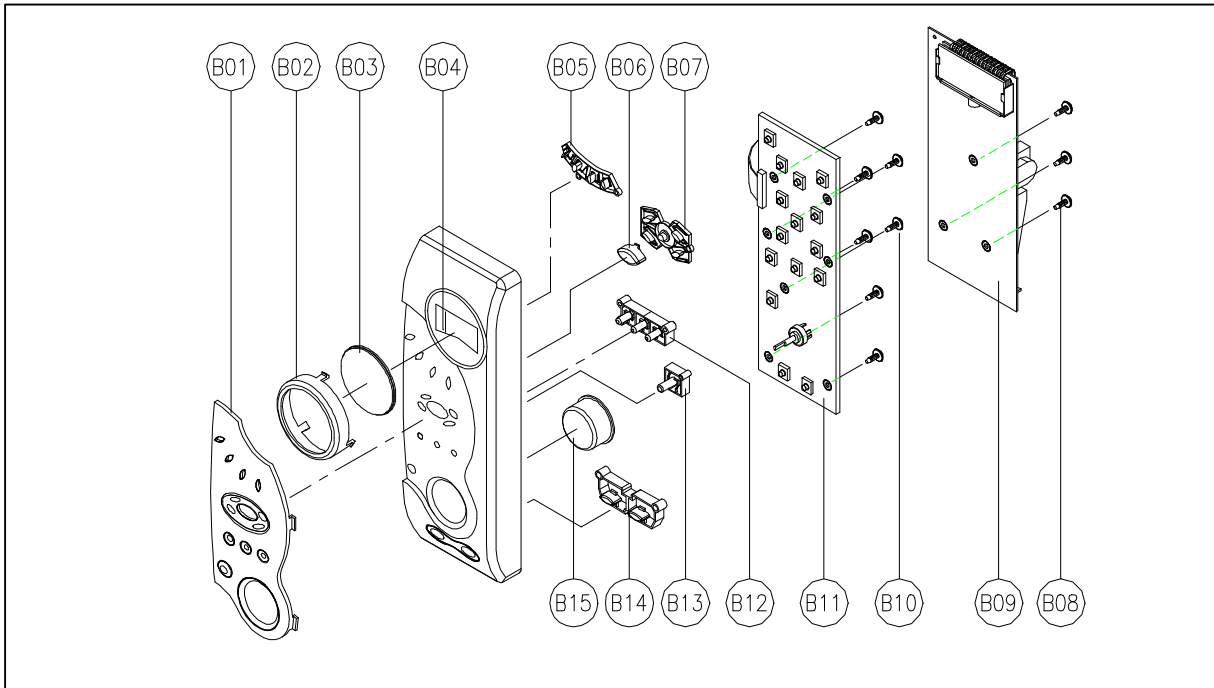
2) Tighten two screws.



NOTE : A small gap may be acceptable if the microwave leakage does not exceed 4mW does not exceed 4mW/cm².

✓ **Caution:** In this Service 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>)

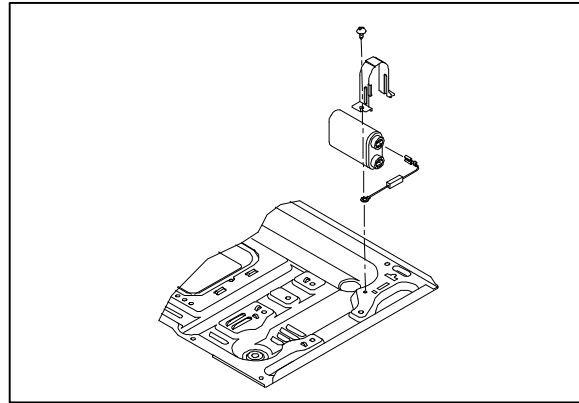
5. To remove control panel parts.



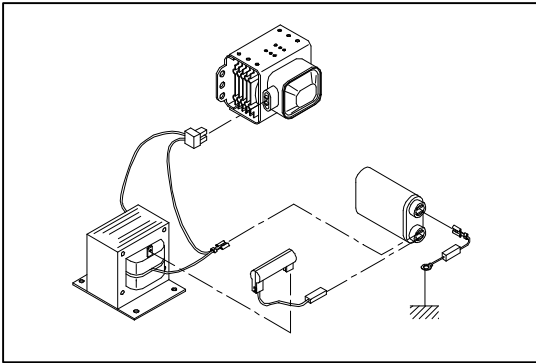
| REF.NO | PART CODE | PART NAME | DESCRIPTION | Q'TY | REMARK |
|--------|------------|-------------------|---------------------|------|--------|
| B01 | 3511605000 | DECORATOR C-PANEL | ABS XR-401 H-2938 | 1 | |
| B02 | 3511605100 | DECORATOR RING | ABS SG-175 SG-0760D | 1 | |
| B03 | 3515501700 | WINDOW DISPLAY | PMMA | 1 | |
| B04 | 3516724100 | CONTROL PANEL | ABS XR-401 H-2938 | 1 | |
| B05 | 3516908300 | BUTTON FUNCTION-A | ABS SG-175 SG-0760D | 1 | |
| B06 | 3516908500 | BUTTON FUNCTION-C | ABS SG-175 SG-0760D | 1 | |
| B07 | 3516908400 | BUTTON FUNCTION-B | ABS SG-175 SG-0760D | 1 | |
| B08 | 7122401211 | SCREW TAPPING | T2S TRS 4X12 MFZN | 3 | |
| B09 | 3514323010 | PCB MAIN AS | KOC-1B0K0S | 1 | |
| B10 | 7121301011 | SCREW TAPPING | TS2 PAN 3X10 MFZN | 7 | |
| B11 | 3514323110 | PCB SUB AS | KOC-1B0K0S | 1 | |
| B12 | 3516908600 | BUTTON FUNCTION-D | ABS SG-175 SG-0760D | 1 | |
| B13 | 3516908700 | BUTTON FUNCTION-E | ABS SG-175 SG-0760D | 1 | |
| B14 | 3516908200 | BUTTON START | ABS SG-175 SG-0760D | 1 | |
| B15 | 3513406000 | KNOB VOLUME | ABS SG-175 SG-0760D | 1 | |

6. Remove the screw which secure the control panel, push up two snap fits and draw forward the control panel assembly.
6. Remove three screws (B08) which secure the control panel.
6. Pull out the Main pcb assembly(B09).
6. Remove seven screws(B10) which secure the control panel.
6. Pull out the Sub pcb assembly(B11).
- (6) Pull out the Knob volume(B15) from the Sub pcb assembly.
- (7) Pull out six buttons from the control panel.
- (8) Pull out Decorator ring(B02) and Window display(B03) from the control panel .
- (9) Pull out the Decorator c-panel(B01) from the control panel.
- (10) Reverse the above steps for reassembly.

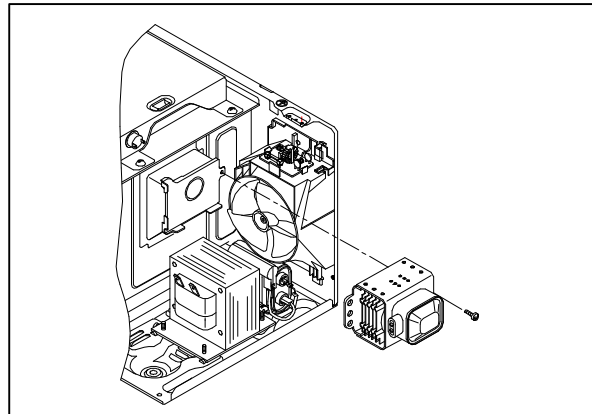
6. To remove high voltage capacitor.
- (1) Remove a screw which secure the grounding ring terminal of the H.V. diode and the capacitor holder.
 - (2) Remove the H.V. diode from the capacitor holder.
 - (3) Reverse the above steps for reassembly.



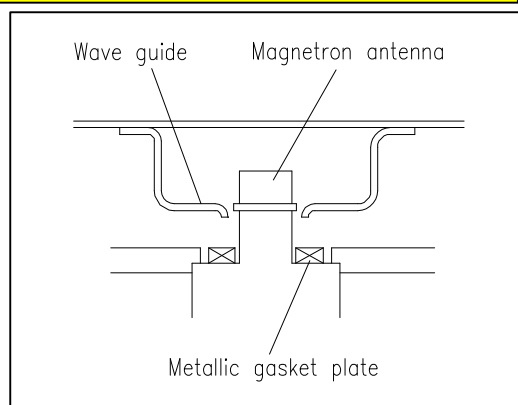
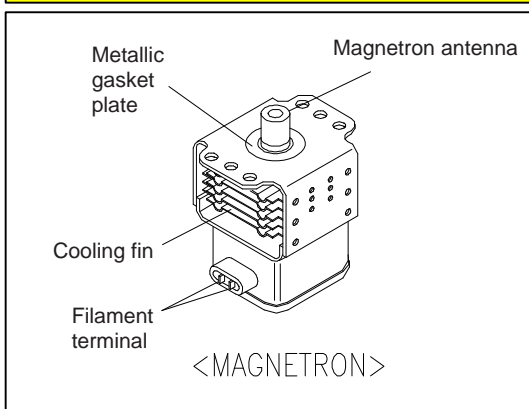
I High voltage circuit wiring



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

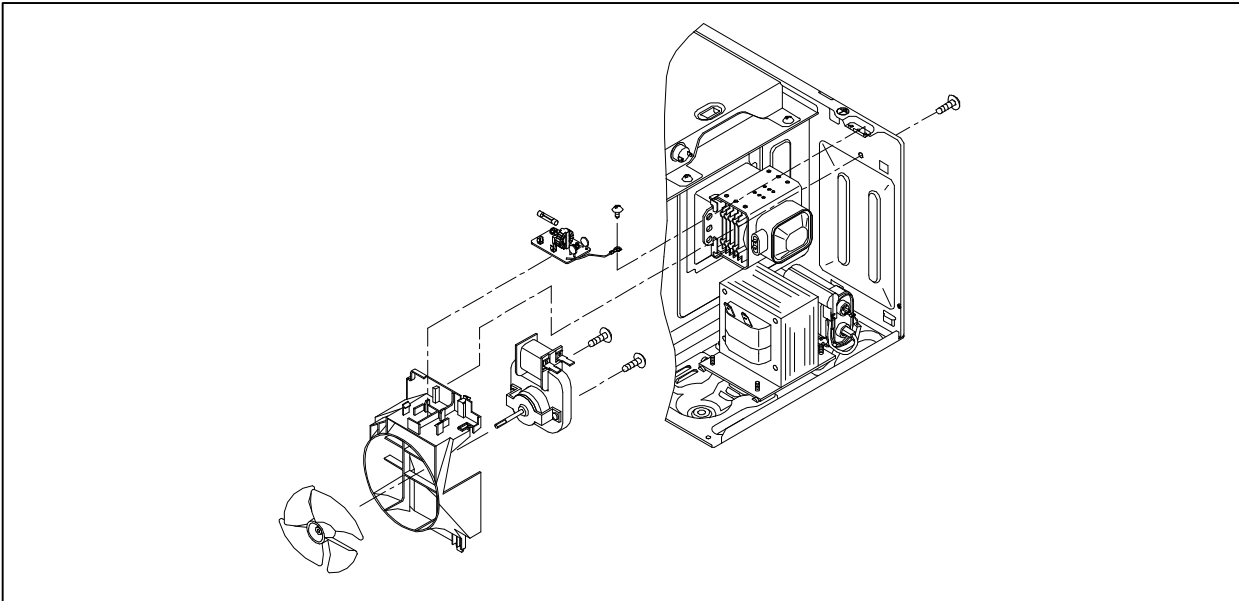


CAUTION : Never install the magnetron without the metallic gasket plate which is packed with each magnetron to prevent microwave leakage. Whenever repair work is carried out on magnetron, check the microwave leakage. It shall not exceed $4\text{mW}/\text{cm}^2$ for a fully assembled oven with door normally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



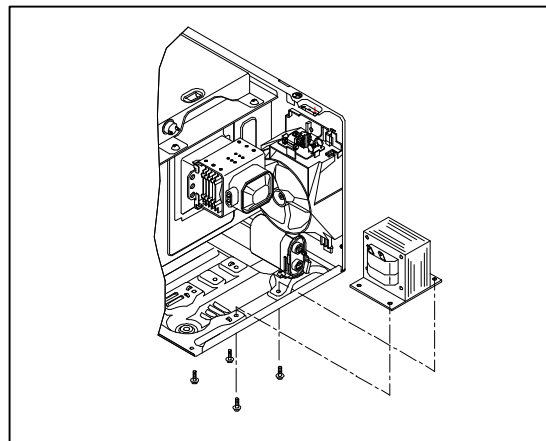
8. To remove wind guide assembly.

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



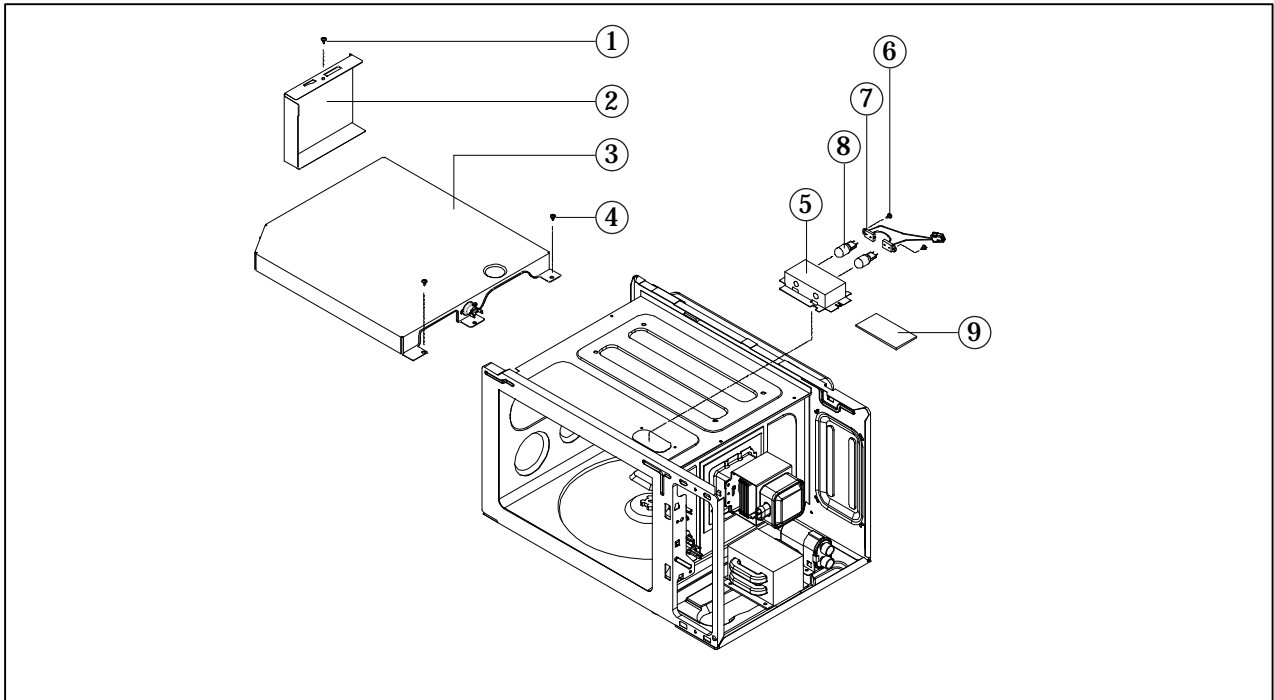
9. To remove H.V.transformer.

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



✓ **Caution:** In this Service 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>)

10. To remove Lamp assembly parts.

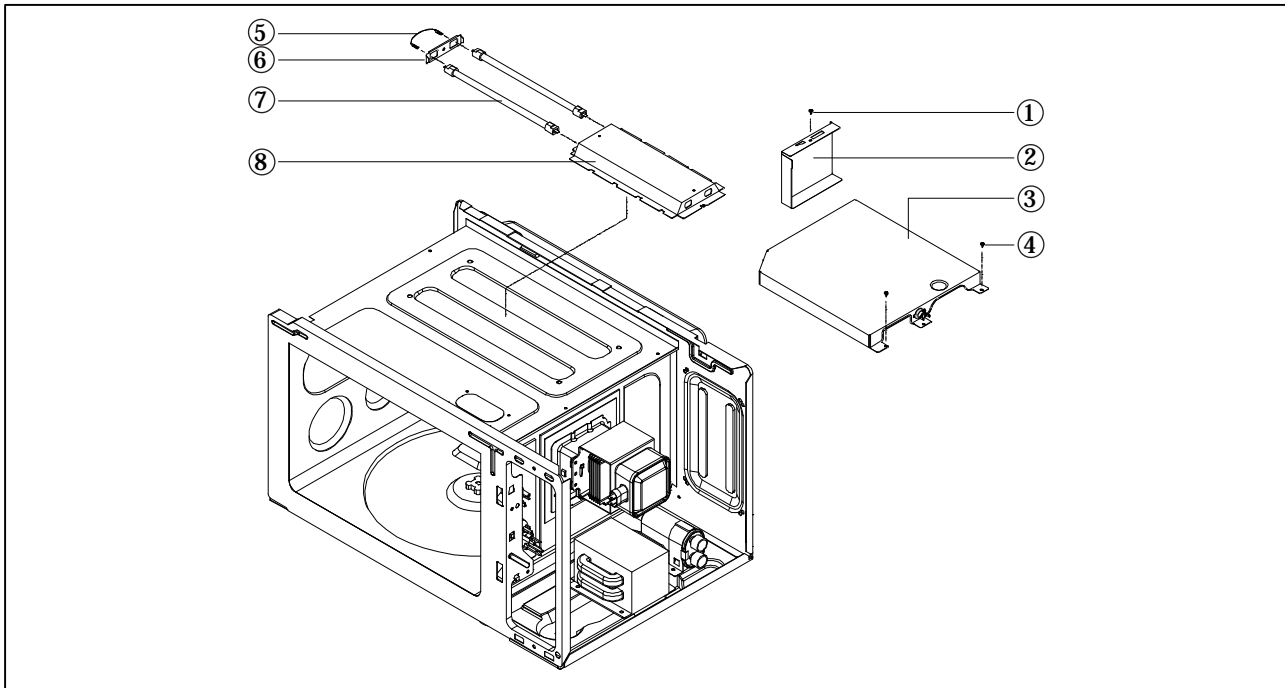


| REF.NO | PART CODE | PART NAME | DESCRIPTION | Q'TY | REMARK |
|--------|------------|---------------------|------------------|------|--------|
| 1 | 7112401011 | SCREW TAPPING | T1 TRS 4X10 MFZN | 1 | |
| 2 | 3512520500 | GUIDE AIR OUTLET | SA1D T0.5 | 1 | |
| 3 | 3513302800 | INSULATOR HEATER *T | SBHG T0.6 | 1 | |
| 4 | 7112401011 | SCREW TAPPING | T1 TRS 4X10 MFZN | 2 | |
| 5 | 3511407800 | COVER LAMP | STS430 T0.5 | 1 | |
| 6 | 7112401011 | SCREW TAPPING | T1 TRS 4X10 MFZN | 2 | |
| 7 | 3513003900 | HOLDER LAMP AS | KOC-1B0K0S | 1 | |
| 8 | 3513602600 | LAMP | HALOGEN | 2 | |
| 9 | 3511407810 | COVER LAMP | GLASS T2.0 | 1 | |

- (1) Remove a screw ① and pull out Guideair outle ② .
- (2) Remove two screws ④ and pull out Insulator heater *t ③ .
- (3) Pull out the Lamp assembly.
- (4) Remove two screws ⑥ pull out the Lamp assembly.
- (5) Pull out the Holder lamp assembly ⑦ from the Cover lamp ⑤ .
- (6) Pull out the Lamp ⑧ from the Holder lamp assembly ⑦ .
- (7) Reverse the above steps for reassembly.

✓ **Caution:** In this Service 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>)

11. To remove Top heater assembly parts.

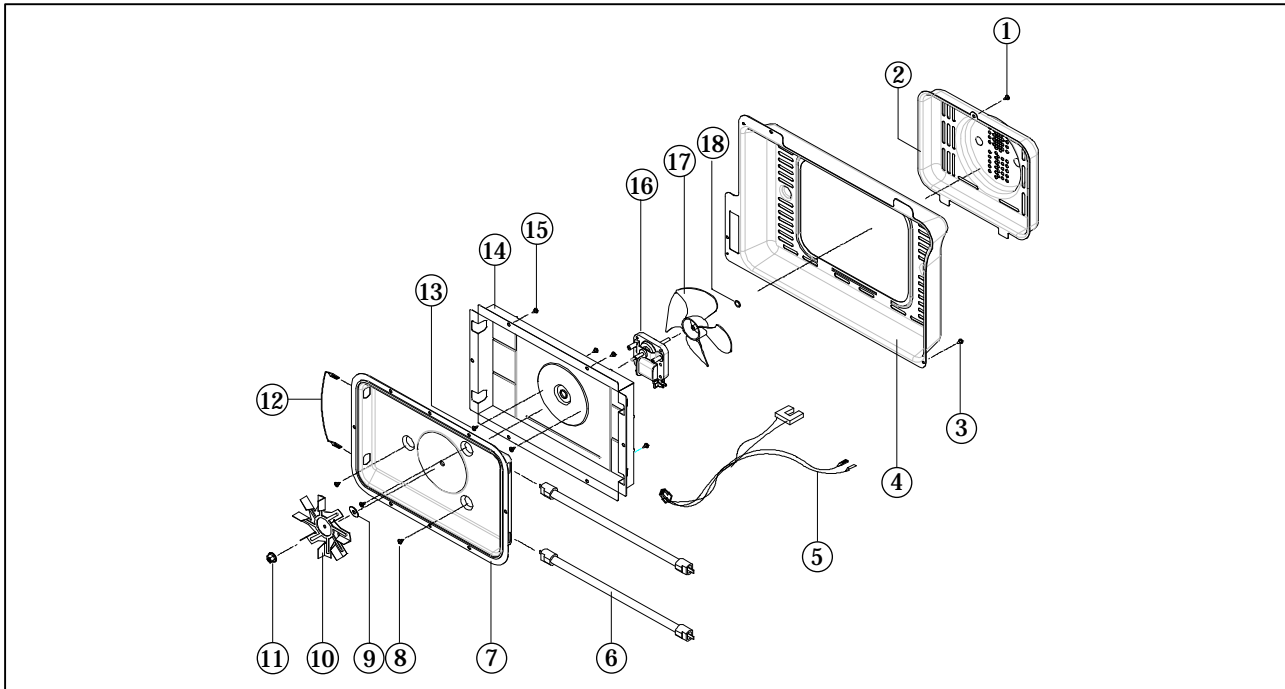


| REF.NO | PART CODE | PART NAME | DESCRIPTION | Q'TY | REMARK |
|--------|------------|---------------------|------------------|------|--------|
| 1 | 7112401011 | SCREW TAPPING | T1 TRS 4X10 MFZN | 1 | |
| 2 | 3512520500 | GUIDE AIR OUTLET | SA1D T0.5 | 1 | |
| 3 | 3513302800 | INSULATOR HEATER *T | SBHG T0.6 | 1 | |
| 4 | 7112401011 | SCREW TAPPING | T1 TRS 4X10 MFZN | 2 | |
| 5 | 3512767000 | HARNESS HEATER | KOC-1B0K0S | 1 | |
| 6 | 3510607700 | BRACKET HEATER *T | SA1D T0.5 | 1 | |
| 7 | 3512803800 | HEATER MIRACLON | 115V 550W 270MM | 2 | |
| 8 | 3511407600 | COVER HEATER *T | STS430 T0.5 | 1 | |

- (1) Remove a screw① and pull out Guide air outlet②.
- (2) Remove two screws④ and pull out Insulator heater *t③.
- (3) Pull out the Top heater assembly.
- (4) Pull out the Harness heater⑤.
- (5) Pull out the Bracket heater *t⑥ from the Cover heater *t⑧.
- (6) Pull out the Heater miraclon⑦ from the Cover heater *t⑧.
- (7) Reverse the above steps for reassembly.

✓ **Caution:** In this Service 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>)

12. To remove Rear heater assembly parts.

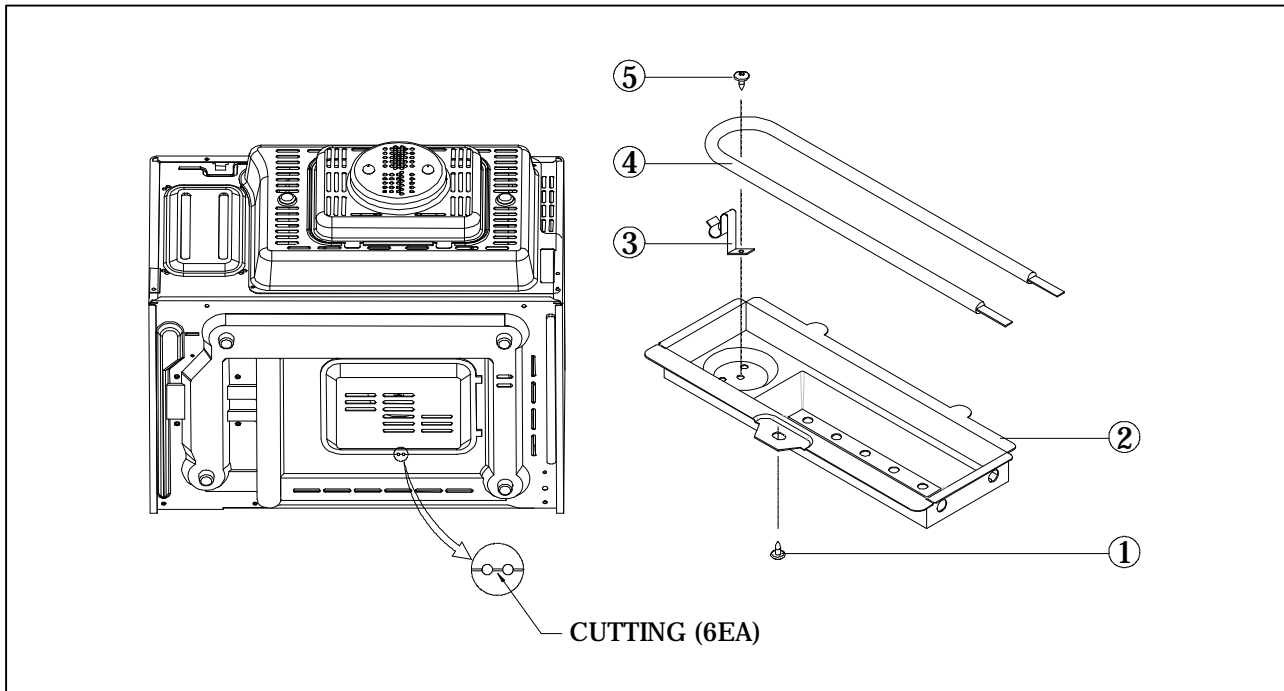


| REF.NO | PART CODE | PART NAME | DESCRIPTION | Q'T Y | REMARK |
|--------|------------|----------------------|-------------------------|-------|--------|
| 1 | 7112401011 | SCREW TAPPING | T1 TRS 4X10 MFZN | 1 | |
| 2 | 3511407300 | COVER MOTOR *B | SBHG T0.6 | 1 | |
| 3 | 7112401011 | SCREW TAPPING | T1 TRS 4X10 MFZN | 2 | |
| 4 | 3511407400 | COVER *B | SBHG T0.6 | 1 | |
| 5 | 3512766900 | HARNESS CONVECTION-B | KOC-1B0K0S | 1 | |
| 6 | 3512803800 | HEATER MIRACLON | 115V 550W 270MM | 2 | |
| 7 | 3511407700 | COVER HEATER *B | SA1D T0.5 | 1 | |
| 8 | 7113400814 | SCREW TAPPING | T1 BIN 4X8 MFNI | 3 | |
| 9 | 7400104011 | WASHER PLAIN | PW-1-4 MFNI | 1 | |
| 10 | 3511800700 | FAN CONVECTION | SA1D T0.5 | 1 | |
| 11 | 7S627W50X1 | NUT HEX | NUT FLANGE M5X0.8P MFZN | 1 | |
| 12 | 3512766800 | HARNESS CONVECTION-A | KOC-1B0K0S | 1 | |
| 13 | 7601400811 | SCREW MACHINE | PAN 4X8 PW MFZN | 2 | |
| 14 | 3513302900 | INSULATOR HEATER *B | SA1D T0.5 | 1 | |
| 15 | 7113400814 | SCREW TAPPING | T1 BIN 4X8 MFNI | 4 | |
| 16 | 3963514300 | MOTOR SHADED POLE | 230V 50Hz MW10CA-T02 | 1 | |
| 17 | 3511800800 | FAN | PP GF20 | 1 | |
| 18 | 7402704600 | RING-C | CR-5 SK5 | 1 | |

- (1) Remove a screw ① and then pull out Cover motor *b②.
- (2) Remove two screws ③ and then pull out Cover *b④.
- (3) Pull out the Harness convection-b⑤.
- (4) Remove four screws ⑬ and then pull out the Rear heater assembly.
- (5) Remove a Nut ⑪ and then pull out the Fan convection ⑩ and Washer plain ⑨.
- (6) Remove three screws ⑧ and then separate the Cover heater *b⑦ and the Insulator heater *b⑭.
- (7) Pull out two Heaters ⑥ from the the Insulator heater *b⑭.
- (8) Remove two screws ⑬ and then separate the Insulator heater *b ⑭ and Motor shaded pole ⑯
- (9) Remove the Ring-c ⑱ and then pull out the Fan ⑰ from Motor shaft.
- (10) Reverse the above steps for reassembly.

✓ **Caution:** In this Service 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>)

13. To remove Motor synchro. And Under heater assembly parts.



| REF.NO | PART CODE | PART NAME | DESCRIPTION | Q'TY | REMARK |
|--------|------------|---------------------|---------------------|------|--------|
| 1 | 7112401011 | SCREW TAPPING | T1 TRS 4X10 MFZN | 1 | |
| 2 | 3511407500 | COVER HEATER *U | STS430 T0.5 | 1 | |
| 3 | 3515304000 | SUPPORTER HEATER *U | STS430 T0.5 | 1 | |
| 4 | 3512802000 | HEATER *U | 230V 400W R18374001 | 1 | |
| 5 | 7113400814 | SCREW TAPPING | T1 BIN 4X8 MFZN | 1 | |

- (1) Cut the Motor synchro. Cover parts from the base plate.
- (2) Remove a screw and then pull out Motor synchro.
- (3) Remove a screw ① and then pull out the Under heater *u assembly .
- (4) Remove a screw ⑤.
- (5) Pull out the Heater *u ④ from the Cover heater *u ②.
- (6) Reverse the above steps for reassembly.

7. INTERLOCK MECHANISM AND ADJUSTMENT

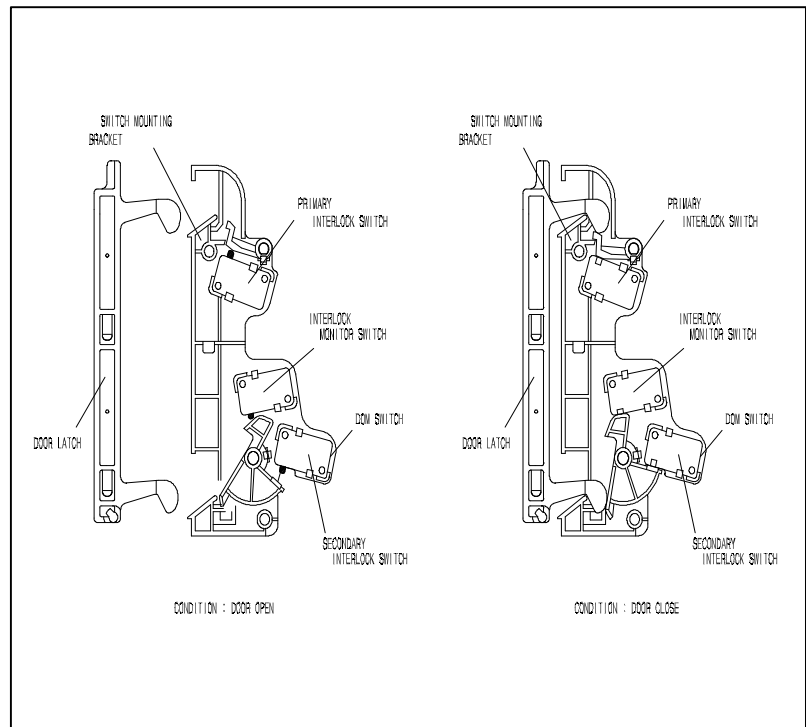
The door lock mechanism is a device which has been specially designed to completely eliminate microwave radiation when the door is opened during operation, and thus to perfectly prevent the danger resulting from the leakage of microwave.

(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 lock lever downward. The lock lever presses the button of the microswitch. Then the button of the primary interlock switch bring it under "ON" condition.

(2) Secondary interlock switch and interlock monitor switch

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



- Adjustment

Interlock monitor switch

When the door is closed, the interlock monitor switch should be 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

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

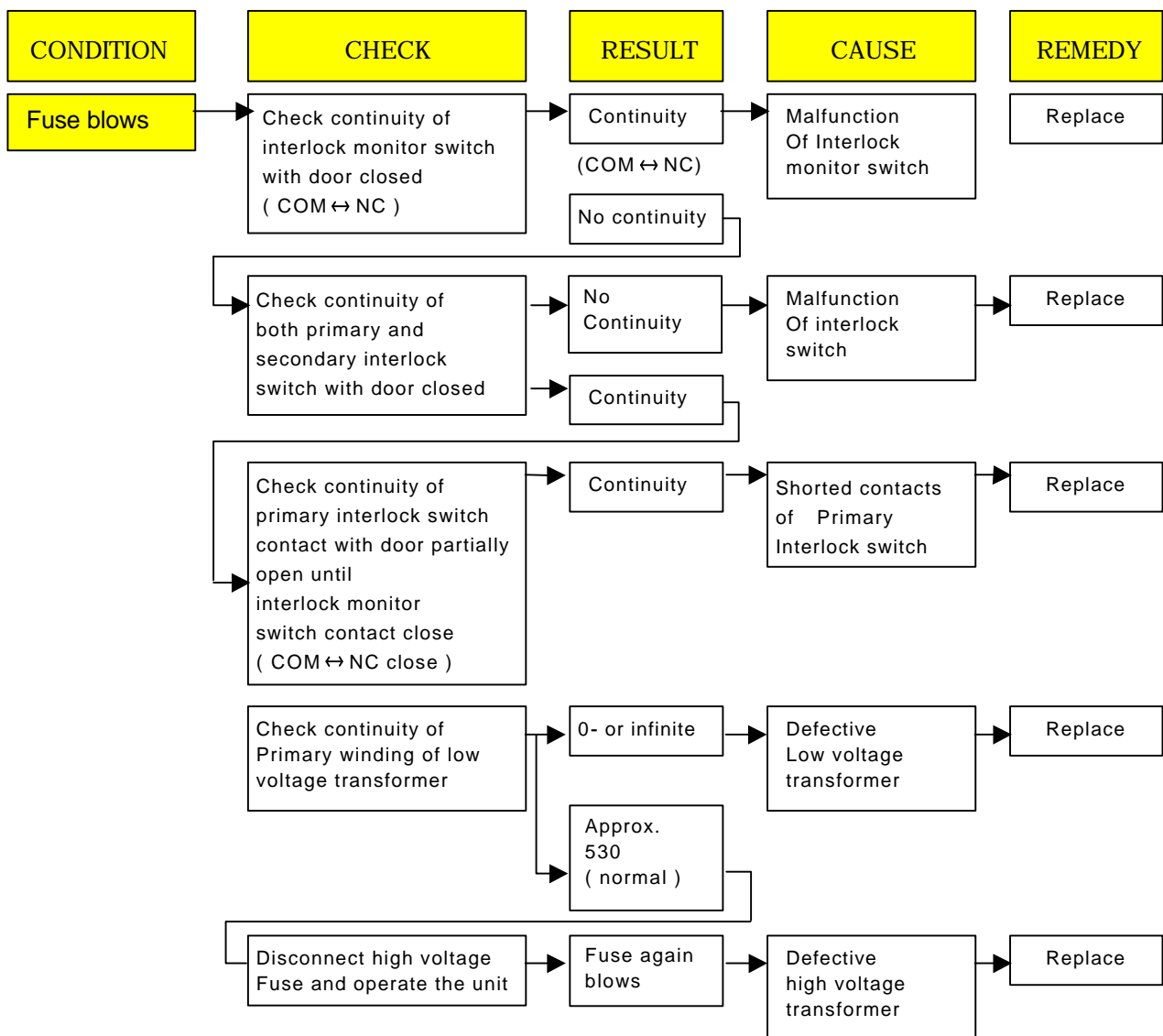
8. TROUBLE SHOOTING GUIDE

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 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; inputs can not be accepted.



| CONDITION | CHECK | RESULT | CAUSE | REMEDY |
|--|--|---------------|---------------------------------|---------|
| Outlet has Proper voltage Fuse does not blow? | Check continuity of magnetron | No Continuity | Defective magnetron. | Replace |
| | Check continuity of noise filter board | No Continuity | Defective Noise filter board | Replace |
| | Check continuity of Power supply cord | No Continuity | Open power supply cord | Adjust |
| | | Continuity | Defective touch control Circuit | Adjust |

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.

| CONDITION | CHECK | RESULT | CAUSE | REMEDY |
|-----------------------------|--|---------------|---|-------------------|
| Grill heater is Not heated. | Check continuity of Primary interlock switch | No Continuity | Malfunction Of primary Interlock switch | Adjust or Replace |
| | Check continuity of secondary interlock switch | No Continuity | Malfunction Of secondary interlock switch | Adjust or replace |
| | Check continuity of heater | No continuity | Defective heater | Replace |
| | Check D.C voltage Being supplied to RELAY (RY2) coil | 0V | Defective Touch control circuit | Replace |
| | | Approx 24V DC | Faulty contacts of RELAY (RY2) or open relay coil | Replace |

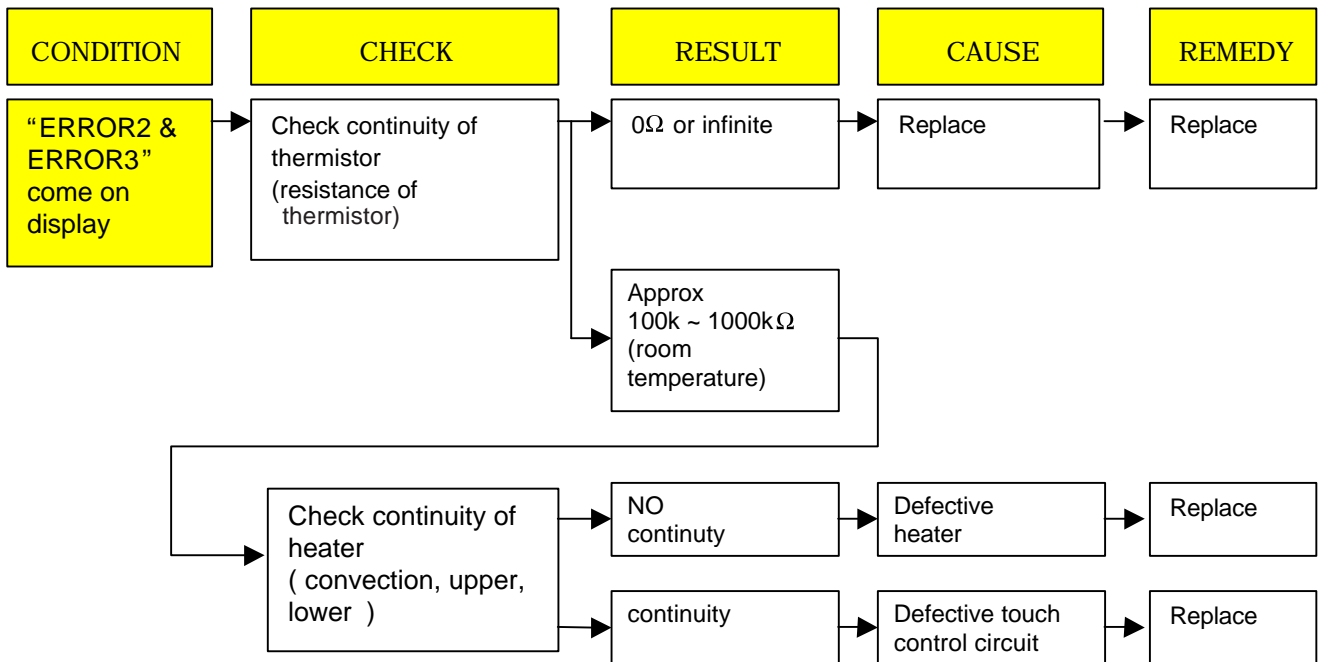
TROUBLE 3) Display shows all figures selected, but oven does not start cooking, even though desired program and time are set and start button is tapped

| CONDITION | CHECK | RESULT | CAUSE | REMEDY |
|---|--|----------------|---|-------------------|
| Turn table motor and oven lamp do not turn on | Check continuity of Primary interlock switch | No Continuity | malfunction of primary interlock switch | Adjust or Replace |
| | Check continuity of Secondary interlock and D.O.M switch | No Continuity | Malfunction Of secondary Interlock and D.O.M switch | Adjust or Replace |
| | Check D.C voltage Being supplied to RELAY(RY4) coil | 0V | Defective touch control Circuit | Replace |
| | | Approx. 24V DC | Fault contacts of RELAY (RY4) or open relay coil. | Replace |

TROUBLE 4) 1) Convection heater is not heated; food will not become hot.
2) convection fan motor does not rotate.

| CONDITION | CHECK | RESULT | CAUSE | REMEDY |
|---|---|---------------|---|-------------------|
| 1) Convection heater is not heated. 2) Convection Fan and Motor does Not rotate. | Check continuity of Primary interlock switch | No Continuity | Malfunction Of primary Interlock switch | Adjust or Replace |
| | Check continuity of secondary interlock switch | No Continuity | Malfunction Of secondary interlock switch | Adjust or replace |
| | Check continuity of (heater or motor) | No continuity | Defective motor | Replace |
| | Check D.C voltage Being supplied to RELAY (RY3, RY6) coil | 0V | Defective Touch control circuit | Replace |
| | | Approx 24V DC | Faulty contacts of RELAY (RY3,RY6) or open relay coil | Replace |

TROUBLE 7) When “ERROR 2 & ERROR 3” come on display.



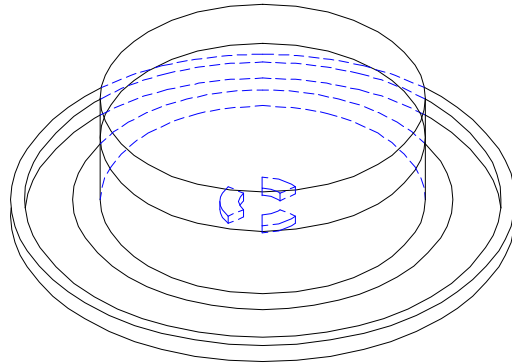
9. MEASUREMENT AND TEST

9-1. MEASUREMENT OF THE MICROWAVE POWER OUTPUT

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

PROCEDURE

1. Microwave power output measurement is made with the microwave oven supplied at rated voltage and operated at its maximum microwave power setting with a load of 1000 ± 5 cc of potable water.
2. The water is contained in a cylindrical borosilicate glass vessel having a maximum material thickness of 3 mm and an outside diameter of approximately 190 mm.
3. The oven and the empty vessel are at ambient temperature prior to the start of the test. The initial temperature of the water is 10 ± 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.
4. Microwave power is switched on.
5. Heating time should be exactly **A** seconds (Refer to table as following). Heating time is measured while the microwave generator is operating at full power. The filament heat-up time for magnetron is not included.
6. The initial and final temperature of water is selected so that the maximum difference between the ambient and final water temperature is 5K.
7. The microwave power output P in watts is calculated from the following formula:



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

□ ΔT is difference between initial and ending temperature.

□ t is the heating time.

The power measured should be **B** (Refer to 2. SPECIFICATIONS) $W \pm 10.0$ %.

CAUTION :

1. Water load should be measured exactly to 1 liters.
2. Input power voltage should be exactly specified voltage (Refer to 2. SPECIFICATIONS).
3. 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 |

9-2. 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

A) Prepare Microwave Energy Survey Meter, 600cc glass beaker, and glass thermometer 100°C (212°F).

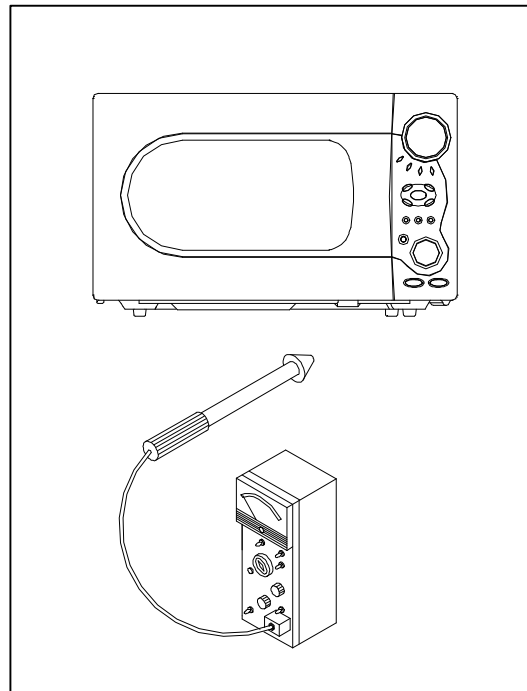
B) Pour 275cc ±15cc of tap water initially at 20 ± 5 °C (68 ± 9°F) in the 600 cc glass beaker with an inside diameter of approx. 95 mm(3.5 in.).

C) Place it at the center of the tray and set it in a cavity.

D) Close the door and operate the oven.

E) 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.



9-3. 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

- (A) Remove connections from the transformer terminals and check continuity.
- (B) Normal readings should be as follows :
 - Secondary winding ... Approx. $100\Omega \pm 10\%$
 - Filament winding ... Approx. 0Ω
 - Primary winding ... Approx. 1.2Ω

2. High voltage capacitor

- (A) Check continuity of capacitor with meter on the highest OHM scale.
- (B) A normal capacitor will show continuity for a short time, and then indicate 10M Ω once the capacitor charged.
- (C) A shorted capacitor will show continuous continuity.
- (D) An open capacitor will show constant 10M Ω
- (E) Resistance between each terminal and chassis should be infinite.

3. High voltage diode

- (A) Isolate the diode from the circuit by disconnecting the leads.
- (B) 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 500V dc 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 Ω 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,

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

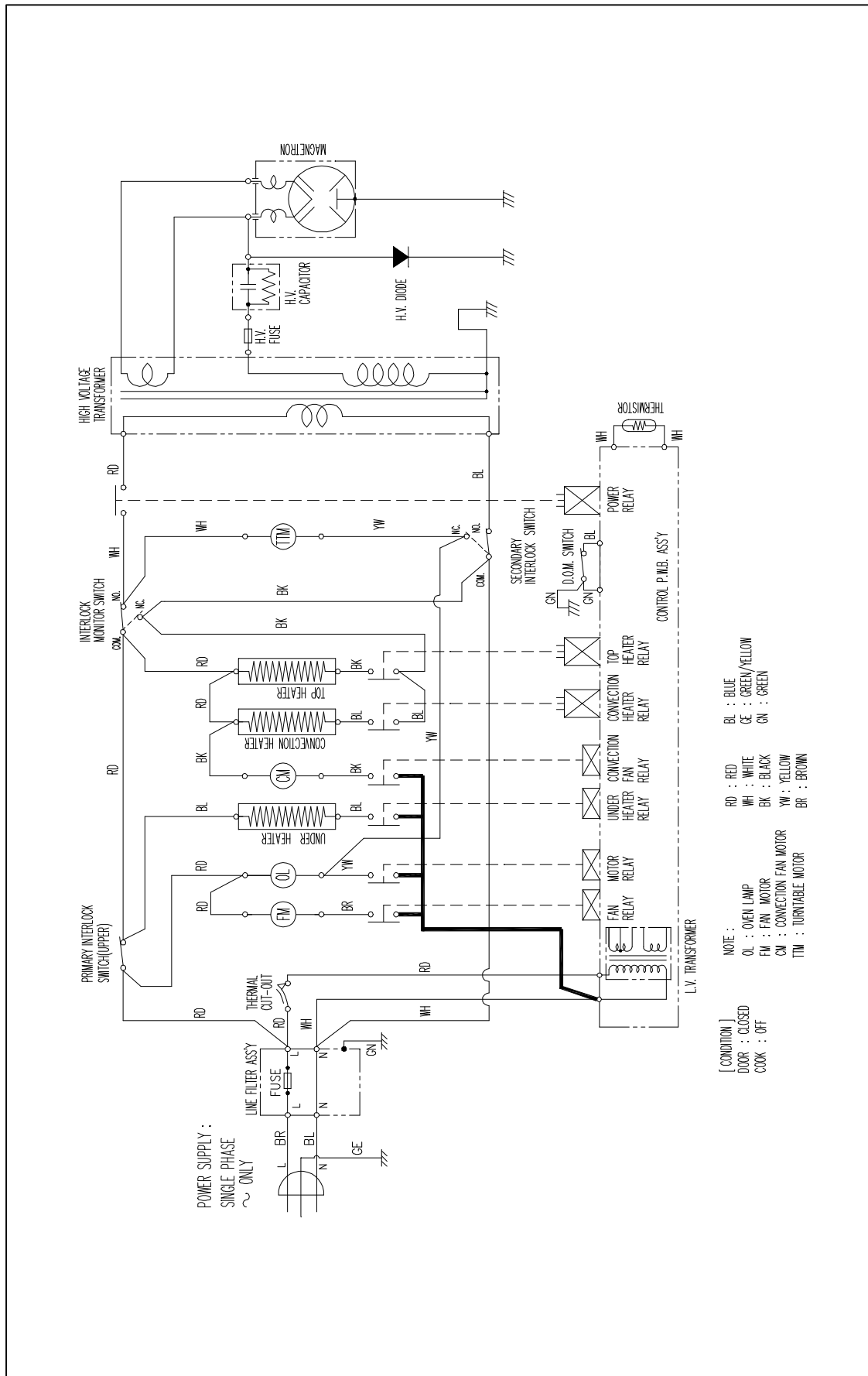
5. Fuse

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.

9-4. COMPONENT ACTION

| COOKING MODE | | MAGNE-TRON | UPPER ELEMENT | LOWER ELEMENT | REAR ELEMENT | CONVECTION FAN |
|--------------|------------------------|------------|---------------|---------------|--------------|----------------|
| MANUAL MODE | M/W | ● | | | | |
| | GRILL-1 | | ● | | | |
| | GRILL-2 | | | ● | | |
| | GRILL-3 | | ● | ● | | |
| | COMBI-1 | ● | ● | ● | ● | ● |
| | COMBI-2 | ● | ● | ● | ● | ● |
| | COMBI-3 | | ● | ● | ● | ● |
| | COMBI-4 | ● | ● | | | |
| | COMBI-5 | ● | ● | ● | | |
| | CONVECTION 100~130 ; É | | | | ● | ● |
| | CONVECTION 140~150 ; É | | | ● | ● | ● |
| | CONVECTION 160~250 ; É | | ● | ● | ● | ● |
| ONE TOUCH | CAKE / BREAD | ● | ● | ● | ● | ● |
| | CRUSTY | ● | ● | ● | ● | ● |
| AUTO MODE | ROAST BEEF | ● | ● | ● | ● | ● |
| | ROAST CHICKEN | ● | ● | ● | ● | ● |
| | ROAST PORK | ● | ● | ● | ● | ● |
| | BAKED FISH | ● | ● | ● | ● | ● |
| | BAKED POTATO | ● | ● | ● | ● | ● |
| | ROAST POTATO | ● | ● | ● | ● | ● |
| | FRESH VEGETABLES | ● | | | | |
| | FROZEN VEGETABLES | ● | | | | |
| | CASSEROLE | ● | | | | |

10. WIRING DIAGRAM



11. EXPLODED VIEW AND PARTS LIST

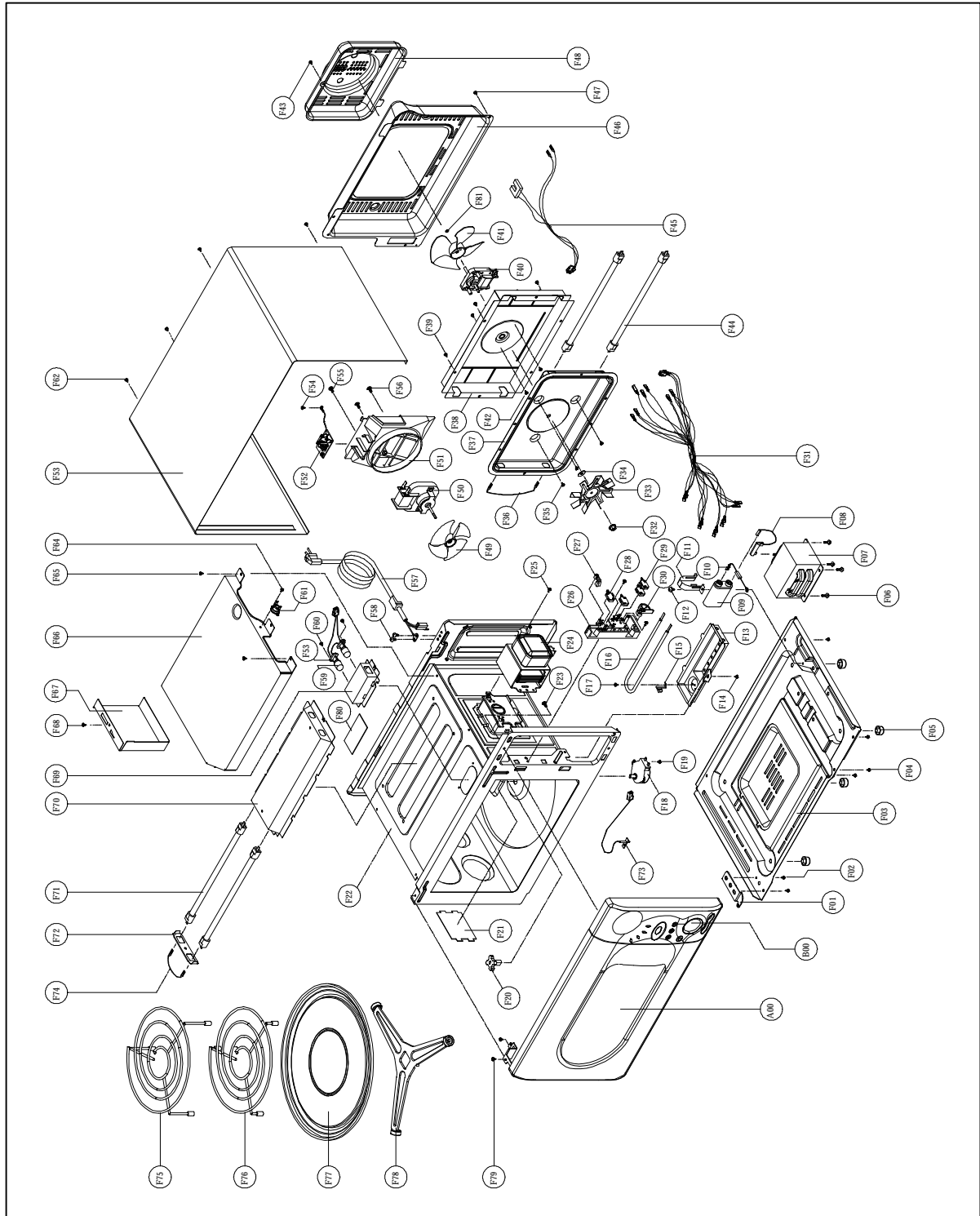
11-1. DOOR ASSEMBLY

Refer to 6.Disassembly and assembly.

11-2. CONTROL PANEL ASSEMBLY

Refer to 6.Disassembly and assembly.

11-3. TOTAL ASSEMBLY



✓ **Caution:** In this Service 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>)

| NO | PART CORD | PART NAME | DESCRIPTION | Q'TY |
|-----|------------|---------------------|---------------------------|------|
| A00 | 3511714000 | DOOR AS | KOC-1B0K0S | 1 |
| B00 | 3516724900 | CONTROL PANEL AS | KOC-1B0K0S | 1 |
| F01 | 3515202200 | STOPPER HINGE *U AS | KOR-121M0A | 1 |
| F02 | 7122400800 | SCREW TAPTITE | TT3 TRS 4X8 MFZN | 1 |
| F03 | 3510313500 | BASE | SBHG T0.8 | 1 |
| F04 | 7112401011 | SCREW TAPPING | T1 TRS 4X10 MFZN | 5 |
| F05 | 3512101400 | FOOT | DASF-310 | 4 |
| F06 | 3516003700 | SPECIAL SCREW | TT3 HEX 4X8 FLG MFZN | 4 |
| F07 | 3518117010 | TRANS HV | DW-N95S0-1BT | 1 |
| F08 | 3518701400 | FUSE HV | 5KV 0.7A | 1 |
| F09 | 3518302300 | CAPACITOR HV | 2100VAC 1.10uF #187 | 1 |
| F10 | 3518400400 | DIODE HV | HVR-1X-3AB 12KV #187 | 1 |
| F11 | 3513003200 | HOLDER HV CAPAITOR | SECC T0.6 | 1 |
| F12 | 7272400811 | SCREW TAPTITE | TT3 TRS 4X8 MFZN | 1 |
| F13 | 3511407500 | COVER HEATER *U | STS430 T0.5 | 1 |
| F14 | 7112401011 | SCREW TAPPING | T1 TRS 4X10 MFZN | 1 |
| F15 | 3515304000 | SUPPORTER HEATER *U | STS 430 T0.5 | 1 |
| F16 | 3512802000 | HEATER *U | 230V 400W R18374001 | 1 |
| F17 | 7113400814 | SCREW TAPPING | T1 BIN 4X8 MFZN | 1 |
| F18 | 3966510200 | MOTOR SYNCRO | 230V 25W GM-16-24FD24 | 1 |
| F19 | 7112401011 | SCREW TAPPING | T1 TRS 4X10MFZN | 1 |
| F20 | 3517401900 | COUPLER | PTFE | 1 |
| F21 | 3511408300 | COVER WAVE GUIDE | MICA T0.35 | 1 |
| F22 | 3516111300 | CAVITY JOINT AS | KOC-1B0K0S | 1 |
| F23 | 7122401211 | SCREW TAPPING | T2S TRS 4X12 MFZN | 1 |
| F24 | 3518002900 | MAGNETRON | 2M218J(F)P | 1 |
| F25 | 3516004000 | SPECIAL SCREW | T2 BOLT FLANGE 5X12 DACRO | 1 |
| F26 | 3513804700 | LOCK | POM | 1 |
| F27 | 3513702100 | LEVER SW MICRO | POM KOG-846TOS | 1 |
| F28 | 4415A17352 | SW MICRO | VP-533A-0F SPNO #187 200G | 2 |
| F29 | 4415A66910 | SW MICRO | VP-531A-0F/SZM-V16-FA-61 | 2 |
| F30 | 3513700800 | LEVER LOCK | POM | 1 |
| F31 | 3512717700 | HARNESS MAIN | KOC-1B0K0S | 1 |
| F32 | 7S627W50X1 | NUT HEX | NUT FLANGE M5X0.8P MFZN | 1 |
| F33 | 3511800700 | FAN CONVECTION | SA1D T0.5 | 1 |
| F34 | 7400104011 | WASHER PLAIN | PW-1-4-MFZN | 1 |
| F35 | 7113400814 | SCREW TAPPING | T1 BIN 4X8 MFNI | 3 |

✓ **Caution:** In this Service 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>)

| NO | PART CORD | PART NAME | DESCRIPTION | Q'TY |
|-----|------------|---------------------|---------------------------|------|
| F36 | 3512766800 | HARNES CONVECTION-A | KOC-1B0K0S | 1 |
| F37 | 3511407700 | COVER HEATER *B | SA1D T0.5 | 1 |
| F38 | 3513302900 | INSULATOR HEATER *B | SA1D T0.5 | 1 |
| F39 | 7113400814 | SCREW TAPPING | T1 BIN 4X8 MFNI | 4 |
| F40 | 3963514300 | MOTOR SHADED POLE | 230V 50Hz MW10CA-T02 | 1 |
| F41 | 3511800800 | FAN | PP GF20 | 1 |
| F42 | 7601400811 | SCREW MACHINE | PAN 4X8 PW MFZN | 2 |
| F43 | 7112401011 | SCREW TAPPING | T1 TRS 4X10MFZN | 1 |
| F44 | 3512803800 | HEATER MIRACLON | 115V 550W 270MM | 2 |
| F45 | 3512766900 | HARNES CONVECTION-B | KOC-1B0K0S | 1 |
| F46 | 3511407400 | COVER *B | SBHG-1 T0.6 | 1 |
| F47 | 7112401011 | SCREW TAPPING | T1 TRS 4X10MFZN | 2 |
| F48 | 3511407300 | COVER MOTOR *B | SBHG-1 T0.6 | 1 |
| F49 | 3511800100 | FAN | PP GF20 | 1 |
| F50 | 3963513010 | MOTOR SHADED POLE | 230V 25W MW15CA-B01 | 1 |
| F51 | 3512515300 | GUIDE WIND | PP GF20 | 1 |
| F52 | 3518605001 | NOISE FILTER | DWLF-M05 | 1 |
| F53 | 3513003900 | HOLDER LAMP AS | KOC-1B0K0S | 1 |
| F54 | 7112401011 | SCREW TAPPING | T1 TRS 4X10 MFZN | 1 |
| F55 | 7122401211 | SCREW TAPPING | T2S TRS 4X12 MFZN | 1 |
| F56 | 7121403011 | SCREW TAPPING | T2S PAN 4X30 MFZN | 2 |
| F57 | 35113A5QJ5 | CORD POWER AS | 3X1,5 80X80 120-RTML 1.4M | 1 |
| F58 | 7112401011 | SCREW TAPPING | T1 TRS 4X10 MFZN | 2 |
| F59 | 3513602600 | LAMP | HALOGEN | 2 |
| F60 | 7112401011 | SCREW TAPPING | T1 TRS 4X10 MFZN | 2 |
| F61 | 3518906100 | THERMOSTAT | OFF:90 ON:60 V#187 | 1 |
| F62 | 7S312X40A1 | SCREW SPECIAL | T1 TRS 4X10 SE MFZN | 4 |
| F63 | 3510804600 | CABINET PAINTING AS | KOC-1B0K0S | 1 |
| F64 | 7121400611 | SCREW TAPPING | T2S PAN 4X6 MFZN | 1 |
| F65 | 7112401011 | SCREW TAPPING | T1 TRS 4X10 MFZN | 2 |
| F66 | 3513302800 | INSULATOR HEATER *T | SBHG-1 T0.6 | 1 |
| F67 | 3512520500 | GUIDE AIR OUTLET | SA1D T0.5 | 1 |
| F68 | 7112401011 | SCREW TAPPING | T1 TRS 4X10 MFZN | 1 |
| F69 | 3511407800 | COVER LAMP | STS430 T0.5 | 1 |
| F70 | 3511407600 | COVER HEATER *T | STS430 T0.5 | 1 |
| F71 | 3512803800 | HEATER MIRACLON | 115V 550W 270MM | 2 |
| F72 | 3510607700 | BRACKET HEATER *T | SA1D T0.5 | 1 |

✓ **Caution:** In this Service 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>)

| NO | PART CORD | PART NAME | DESCRIPTION | Q'TY |
|-----|------------|--------------------|----------------------|------|
| F73 | 3514801400 | SENSOR TEMPERATURE | PTM-K312-D7 | 1 |
| F74 | 3512767000 | HARNESS HEATER | KOC-1B0K0S | 1 |
| F75 | 3517207300 | TRAY RACK AS | KOC-1B0K0S 120MM | 1 |
| F76 | 3517207310 | TRAY RACK AS | KOC-1B0K0S 30MM | 1 |
| F77 | 3517207200 | TRAY METAL | SPP T0.6 | 1 |
| F78 | 3512521000 | GUIDE ROLLER AS | KOC-1B0K0S | 1 |
| F79 | 3516003700 | SPECIAL SCREW | TT3 HEX 4X8 FLG MFZN | 2 |
| F80 | 3511407810 | COVER LAMP | T/GLASS T2.0 | 1 |
| F81 | 7402704600 | RING-C | CR-5 SK5 | 1 |

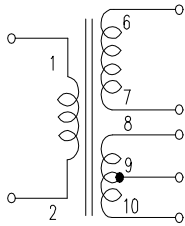
12. PRINTED CIRCUIT BOARD

1. CIRCUIT CHECK PROCEDURE

1) Low voltage transformer check

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

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



| Terminal | Voltage(load) | Voltage(no load) |
|----------|---------------|------------------|
| 6 i 7 | AC 17.0V | AC 19.9V |
| 8 i 9 | AC 1.3V | AC 1.6V |
| 9 i 10 | AC 1.3V | AC 1.6V |

NOTE1: Secondary side voltage of the low voltage transformer changes in proportion to fluctuation of power source voltage.

NOTE2: The allowable tolerance of the secondary voltage is within $\pm 5\%$ of nominal voltage.

2) Voltage Check

- Key check point

| NO | CHECK POINT | REMARK |
|----|------------------|----------------------|
| 1 | IC1 PIN 63,64 | 5VDC $\pm 5\%$ |
| 2 | IC1 PIN 38 | T : 20 ms(50Hz) |
| 3 | IC1 PIN 33 or 34 | T : 250 ns(4MHz) |

- Check method

| NO | MEASURE POINT | WAVE FORM | REMEDY | REMARK |
|----|---------------|-------------------|---------------------|---------|
| 1 | MP1 | DC 5V $\pm 5\%$ | Replace ZD3, EC1, | No load |
| 2 | MP2 | DC 24V $\pm 20\%$ | Replace D20-23, EC6 | No load |

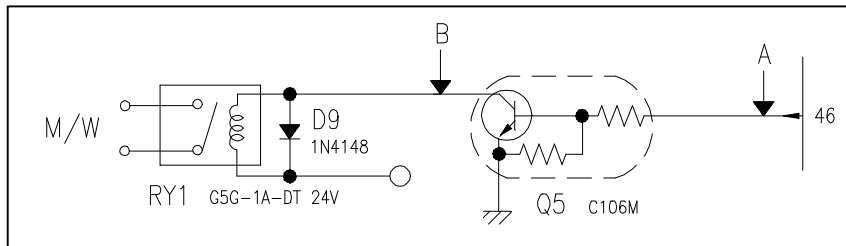
NOTE : Each measure point must be measured with GND points.

: The marks of the above correspondig voltage (+5V,+24V) are written on the PCB.

3) Case of no microwave oscillation

(1) When touching **M/W** button, oven lamp turns on and Fan motor and turntable rotate, and cook indicator in display comes on.

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

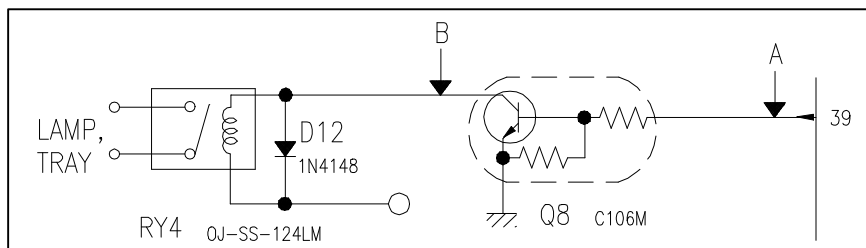


- Check method

| STATE | POINT A | POINT B |
|--------------------|---------|---------|
| RELAY 1 ON | +5V DC | GND |
| RELAY 1 OFF | GND | +24V DC |

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

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

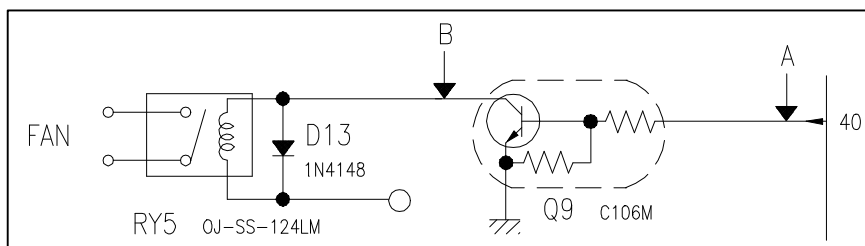


- Check method

| STATE | POINT A | POINT B |
|--------------------|---------|---------|
| RELAY 4 ON | +5V DC | GND |
| RELAY 4 OFF | GND | +24V DC |

(3) When touching **M/W** button, oven lamp turns on and fan motor does not rotate but cook indicator in display comes on.

● Cause: **RELAY 5** does not operate.



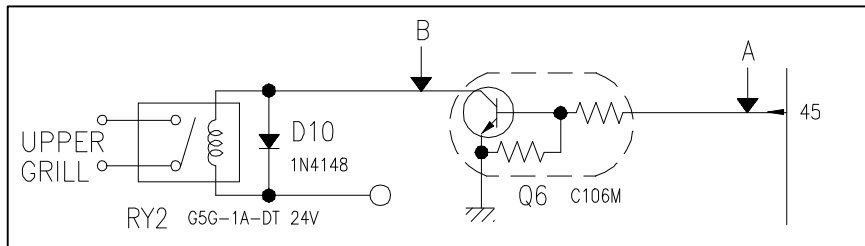
- Check method

| STATE | POINT A | POINT B |
|--------------------|---------|---------|
| RELAY 5 ON | +5V DC | GND |
| RELAY 5 OFF | GND | +24V DC |

4) Case of no heating of upper grill

When touching **GRILL1 & COMBI** button, oven lamp turns on and fan motor and turntable motor rotate and cook indicator in the display comes on.

- Cause: **RELAY 2** does not operate.

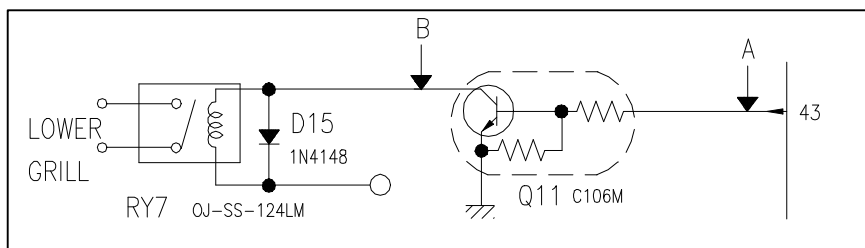


| STATE | POINT A | POINT B |
|--------------------|---------|---------|
| RELAY 2 ON | +5V DC | GND |
| RELAY 2 OFF | GND | +24V DC |

5) Case of no heating of lower grill

When touching **GRILL2 & COMBI** button, oven lamp turns on and fan motor and turntable motor rotate and cook indicator in the display comes on.

- Cause: **RELAY 7** does not operate.

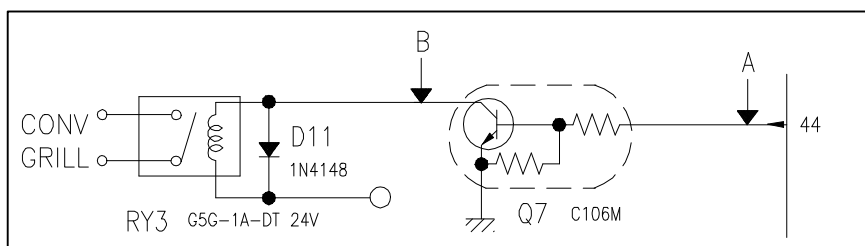


| STATE | POINT A | POINT B |
|--------------------|---------|---------|
| RELAY 7 ON | +5V DC | GND |
| RELAY 7 OFF | GND | +24V DC |

6) Case of no heating of convection grill

When touching **CONVECTION** button, oven lamp turns on and fan motor and turntable motor rotate and cook indicator in the display comes on.

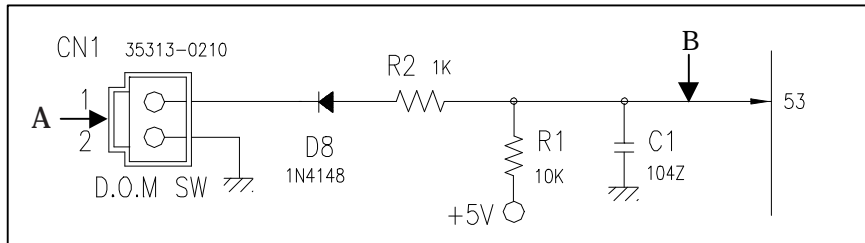
- Cause: **RELAY 3** does not operate.



| | | |
|-------------|---------|---------|
| STATE | POINT A | POINT B |
| RELAY 3 ON | +5V DC | GND |
| RELAY 3 OFF | GND | +24V DC |

7) Case of no stopping of the count down timer

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

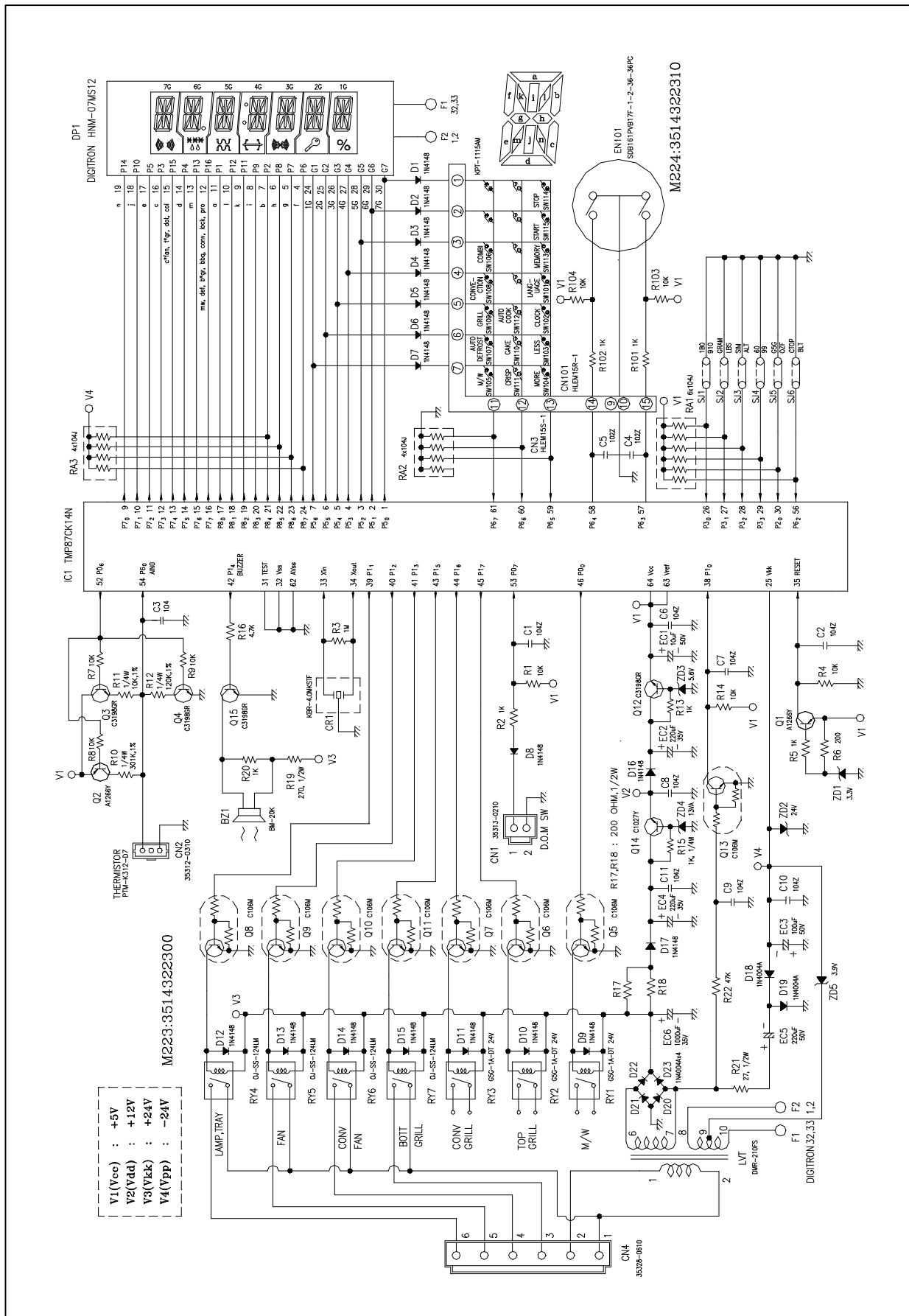


- Check method

| STATE \ POINT | A | B |
|----------------|-------|--------|
| 1) DOOR OPEN | OPEN | +5V DC |
| 2) DOOR CLOSED | CLOSE | GND |

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

13. P.C.B. CIRCUIT DIAGRAM



✓ **Caution:** In this Service 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>)

PCB ASS'Y PART LIST

| NO | NAME | SYMBOL | SPECIFICATION | PART CODE | Q'TY |
|----|-------------------|-----------------|----------------------------------|------------|------|
| 1 | PCB MAIN | M223 | 95.5 X 197 | 3514322300 | 1 |
| 2 | PCB SUB | M224 | 90 X 197 | 3514322310 | 1 |
| 3 | BUZZER | BZ1 | BM-20K | 3515600100 | 1 |
| 4 | CAPACITOR CERAMIC | C1~C3,C6~C11 | 104 50V Z AXIAL | CCZF1H104Z | 9 |
| 5 | CAPACITOR CERAMIC | C4,C5 | 102 50V Z AXIAL | CCZB1H102K | 2 |
| 6 | CAPACITOR ELECTRO | EC1 | 50V RS 10uF | CEXE1H100A | 1 |
| 7 | CAPACITOR ELECTRO | EC2,EC4 | 35V RSS 220uF | CEXF1V221V | 2 |
| 8 | CAPACITOR ELECTRO | EC6 | 35V RSS 1000uF | CEXF1V102V | 1 |
| 9 | CAPACITOR ELECTRO | EC5 | 50V RSS 220uF | CEXF1H221V | 1 |
| 10 | CAPACITOR ELECTRO | EC3 | 50V RSS 100uF | CEXF1H101V | 1 |
| 11 | CONNECTOR FILM | CN3 | HLEM15S-1 | 4CW215SBD0 | 1 |
| 12 | CONNECTOR WAFER | CN1 | 35313-0210 | 30166M7020 | 1 |
| 13 | CONNECTOR WAFER | CN2 | 35312-0310 | 30166M5030 | 1 |
| 14 | CONNECTOR WAFER | CN4 | 35328-0610 | 4CW3061MX0 | 1 |
| 15 | DIODE SWITCHING | D1~D17 | 1N4148 AUTO 52mm | DZN4148--- | 17 |
| 16 | DIODE RECTIFYING | D18~D23 | 1N4004A AUTO 52mm | DZN4004A-- | 6 |
| 17 | DIODE ZENER | ZD1 | UZ -3.3BSB | DZUZ3R3BSB | 1 |
| 18 | DIODE ZENER | ZD5 | UZ -3.9BSB | DZUZ3R9BSB | 1 |
| 19 | DIODE ZENER | ZD3 | UZ -5.6BSB | DZUZ5R6BSB | 1 |
| 20 | DIODE ZENER | ZD4 | UZ -13BSA | DZUZ13BSA- | 1 |
| 21 | DIODE ZENER | ZD2 | UZ -24BSB | DZUZ24BSB- | 1 |
| 22 | DIGITRON | DP1 | HNM-07MS12 | DHNM07MS12 | 1 |
| 23 | HOLDER VFD | DPH | NYLON 66 | 3513002000 | 1 |
| 24 | IC MICOM | IC1 | TMP87CK14N-1N67 | 13GS1B0K00 | 1 |
| 25 | RESISTOR | R1,R4,R7~R9,R14 | 1/6W 10K Ohm 5% | RD-AZ103J- | 6 |
| 26 | RESISTOR | R2,R5,R13,R20 | 1/6W 1K Ohm 5% | RD-AZ102J- | 4 |
| 27 | RESISTOR | R6 | 1/6W 200 Ohm 5% | RD-AZ201J- | 1 |
| 28 | RESISTOR | R3 | 1/6W 1M Ohm 5% | RD-AZ105J- | 1 |
| 29 | RESISTOR | R16 | 1/6W 4.7K Ohm 5% | RD-AZ472J- | 1 |
| 30 | RESISTOR | R22 | 1/6W 47K Ohm 5% | RD-AZ473J- | 1 |
| 31 | RESISTOR | R15 | 1/4W 1K Ohm 5% | RD-4Z102J- | 1 |
| 32 | RESISTOR | R19 | 1/2W 270 Ohm 5% | RD-2Z271JS | 1 |
| 33 | RESISTOR | R21 | 1/2W 27 Ohm 5% | RD-2Z270JS | 1 |
| 34 | RESISTOR | R17 | 1/2W 200 Ohm 5% | RD-2Z201JS | 1 |
| 35 | RESISTOR | R18 | 1/2W 200 Ohm 5% | RD-2Z201JS | 1 |
| 36 | RESISTOR | R10 | 1/4W 301K Ohm 1% | RN-4Z3013F | 1 |
| 37 | RESISTOR | R11 | 1/4W 10K Ohm 1% | RN-4Z1002F | 1 |
| 38 | RESISTOR | R12 | 1/4W 120K Ohm 1% | RN-4Z1203F | 1 |
| 39 | RESISTOR ARRAY | RA1 | 7P(6) 1/8 100K 5% | RA-87X104J | 1 |
| 40 | RESISTOR ARRAY | RA2,RA3 | 5P(4) 1/8 100K 5% | RA-85X104J | 2 |
| 41 | RESONATOR CERAMIC | CR1 | KBR-4.0MKSTF | 5PKBR40MKS | 1 |
| 42 | SW RELAY | RY1~RA3 | G5G-1A-DT 24V | 5SC0101124 | 3 |
| 43 | SW RELAY | RA4~RA7 | OJ-SS-124LM | 5SC0101405 | 4 |
| 44 | TRANSISTOR | Q1,Q2 | KTA1266Y AUTO | TZTA1266Y- | 2 |
| 45 | TRANSISTOR | Q3,Q4,Q12,Q15 | KTC3198GR AUTO | TZTC3198GR | 4 |
| 46 | TRANSISTOR | Q14 | KTC-1027Y AUTO | TZTC1027Y- | 1 |
| 47 | TRANSISTOR | Q5~Q11,Q13 | KRC106M AUTO | TZRC106M-- | 8 |
| 48 | TRANS POWER | LVT1 | DMR-210FS | 5EPV041410 | 1 |
| 49 | THERMISTOR | | PTM-K312-D7 | 3514801400 | 1 |
| 50 | CONNECTOR WAFER | CN101 | HLEM15R-1 | 4CW215RBD0 | 1 |
| 51 | RESISTOR | R101,R102 | 1/6W 1K Ohm 5% | RD-AZ102J- | 2 |
| 52 | RESISTOR | R103,R104 | 1/6W 10K Ohm 5% | RD-AZ103J- | 2 |
| 53 | SW ROTARY | EN101 | SDB161PVB17F-1-2-36-36PC(PITCH5) | 5S10109002 | 1 |
| 54 | SW TACT | SW101~SW115 | KPT-1115AM | 5S50101Z93 | 15 |
| 55 | WIRE FLAT | WF1 | 1.25X15X90XC | WSJ-159007 | 1 |

Free Manuals Download Website

<http://myh66.com>

<http://usermanuals.us>

<http://www.somanuals.com>

<http://www.4manuals.cc>

<http://www.manual-lib.com>

<http://www.404manual.com>

<http://www.luxmanual.com>

<http://aubethermostatmanual.com>

Golf course search by state

<http://golfingnear.com>

Email search by domain

<http://emailbydomain.com>

Auto manuals search

<http://auto.somanuals.com>

TV manuals search

<http://tv.somanuals.com>