Confidentia

Typhoon Project Training Manual

(Easytronics)

Jan.2008

Oven R&D Group

1. Precaution

1-1. Safety Precaution

Follow these special safety precautions during repair or inspection.

1. All repairs should be done in accordance with the procedures described in this manual.
   This product complies with Federal Performance Standard 21 CFR Subchapter J(DHHS).
2. Check all grounds.
3. Do not power the OVEN from a “2 – prong” AC cord. Be sure that all of the built – in protective devices are replaced. Restore any missing protective shields.
4. When reinstalling the chassis and its assemblies, be sure to restore all protective devices including nonmetallic control knobs and compartment covers.
5. Make sure that there are no cabinet openings through which people --particularly children --might insert objects and contact dangerous voltages.
6. Service technicians should remove their watches while repairing an OVEN.
7. Design Alteration Warning:
   Use exact replacement parts only, i.e., only those that are specified in the drawings and parts lists of this manual. Never alter or add to the mechanical or electrical design of the OVEN. Any design changes or additions will void the manufacturer’s warranty.

Always unplug the unit’s AC power cord from the AC power source before attempting to remove or reinstall any component or assembly.

1. Precaution

1-1. Safety Precaution

8. Never defeat any of the B+ voltage interlocks. Do not apply AC power to the unit (or any of its assemblies) unless all solid-state heat sinks are correctly installed.

9. Some semiconductor ("solid state") devices are easily damaged by static electricity. Such components are called Electro statically Sensitive Devices (ESDs). Examples include integrated circuits and field effect transistors. Immediately before handling any semiconductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground.

10. Always connect a test instrument's ground lead to the instrument chassis ground before connecting the positive lead; always remove the instrument's ground lead last.

11. Use replacement components that have the same ratings, especially for flame resistance and dielectric strength specifications. A replacement part that does not have the same safety characteristics as the original might create shock, fire or other hazards.

NOTE: Connect the oven to a 20 A. When connecting the oven to a 15 A, make sure that circuit breaker can operate.

12. Never touch any circuit wiring with your hand nor with uninsulated tool during operation.

2. Features and Specifications

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2-1. Features

□Concept : Two Convection Fan

Partition Mode	Cooking Function	Heating Element
Mode	Convection	Convection H
	Convection Grill	Convection H + Small H
	Conventional	Small H+ Bottom H
	Large Grill	Large H + Small H
	Intensive Bake	Convection H + Bottom H
	Fast Preheating	Convection H + Large H

* 230V 50Hz
- ✔ Grill : 1600W / 700W
- ✔ Convection : 1700W
- ✔ Bottom : 600W

2. Features and Specifications

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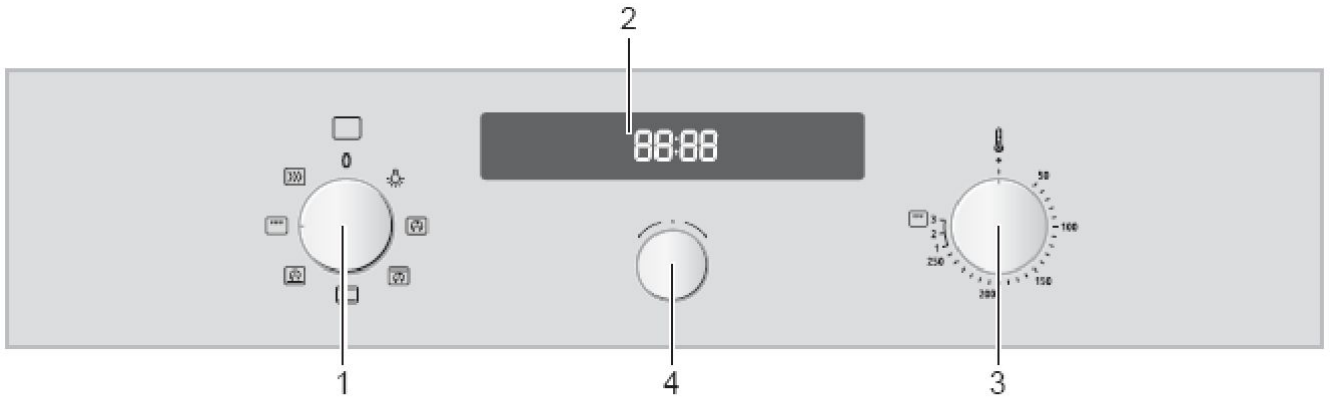
2-2. Control Panel



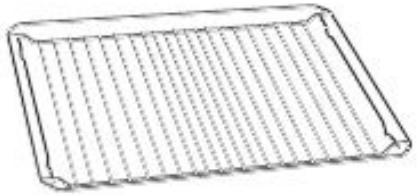
1. Function Select Knob
2. Window Display
3. Temp Control Knob
4. Time Select Knob

2. Features and Specifications

revised Page

2-3. Accessory

BAKING TRAY
The baking tray could be used for the preparation of cakes, cookies and other pastries.



BIG GRID
The big grid should be used for grilling and roasting meals. You could use it with casseroles and other baking pots.

2. Features and Specifications

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2-4. Specifications

Specifications	Classic 2	Remarks
Model Name	BF6641****	
Model Type Install	Single Built-in	
Design	Classic2	
Mode	Single Conv.	
Main sales point	Dual Convection Fan	
Oven Features		
Cavity Interior	C.Enamel	
Cavity Structure	Forming	
Oven Colors	STSS/BLK/Glass	
Oven Doors (D: double, T: triple, Q: quadruple)	T	
Door Opening	Drop Down	
Interior Lamp watts	Bulb	

2. Features and Specifications

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2-4. Specifications

Electric Features		Classic 2	Remarks
Oven Temp Ranges		50~2700℃	40~300 ☐ 50~2700℃
Upper Grill (In/Out)		1600W/700W	1100W ☐ 700W
Lower Grill		600W	1100W ☐ 600W
Convection		1700W	
Oven Function			
Number of Functions		6	
Single Mode	1. Convection	Yes	
convection	2. Top heat +	Yes	
	3. Conventional	Yes	
	4. Large Grill	Yes	
	5. Small Grill	No	
	6. Bottom + convection	Yes	
Auto Cook		No	Delete

2. Features and Specifications

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2-4. Specifications

Control Features	Classic 2	Remarks
Clock	Yes	
Child Safety Lock	No	
Sound On/Off	No	
Count Timer	Yes	
Cook Time	No	
End Time	No	
Oven Temp	Yes	
Light (LAMP) On/Off	No	
Equipment Supplied		
Square Baking Tray	1	
Square Wire Rack	1	

3. Installation

3-1. How to install the oven

IMPORTANT

Any electrical installation work must be carried out by a qualified electrician / competent person.

The oven must be installed according to the instructions supplied.

Safety Instructions for the Installer

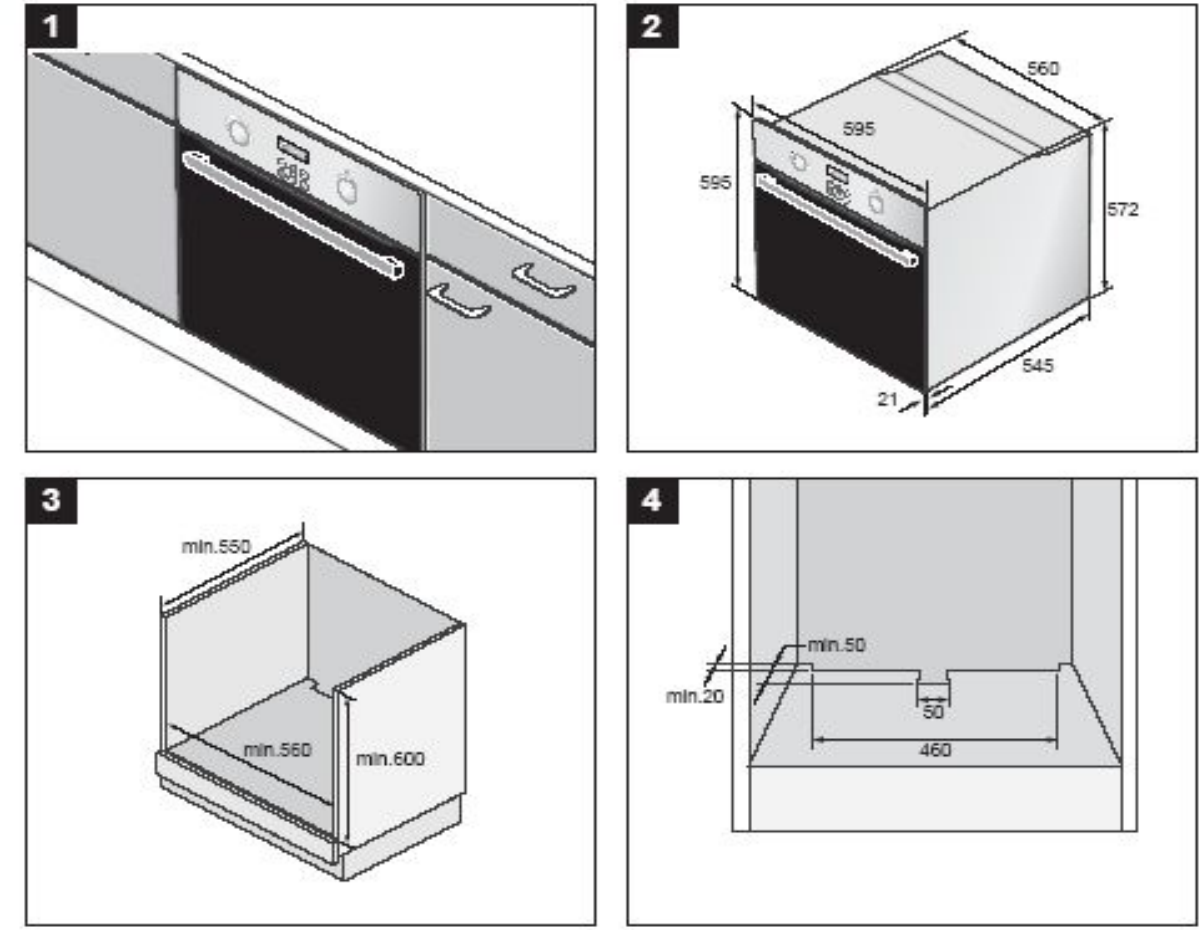
Protection against access to live parts must be guaranteed by the installation.

The unit in which the appliance is fitted must satisfy the requirements of DIN 68930 in respect of stability. This oven must be installed by qualified personnel to the relevant Standards.

This oven is heavy. Take care when moving it. Remove all packaging, both inside and outside the oven before using the oven. Do not attempt to modify the oven in any way.

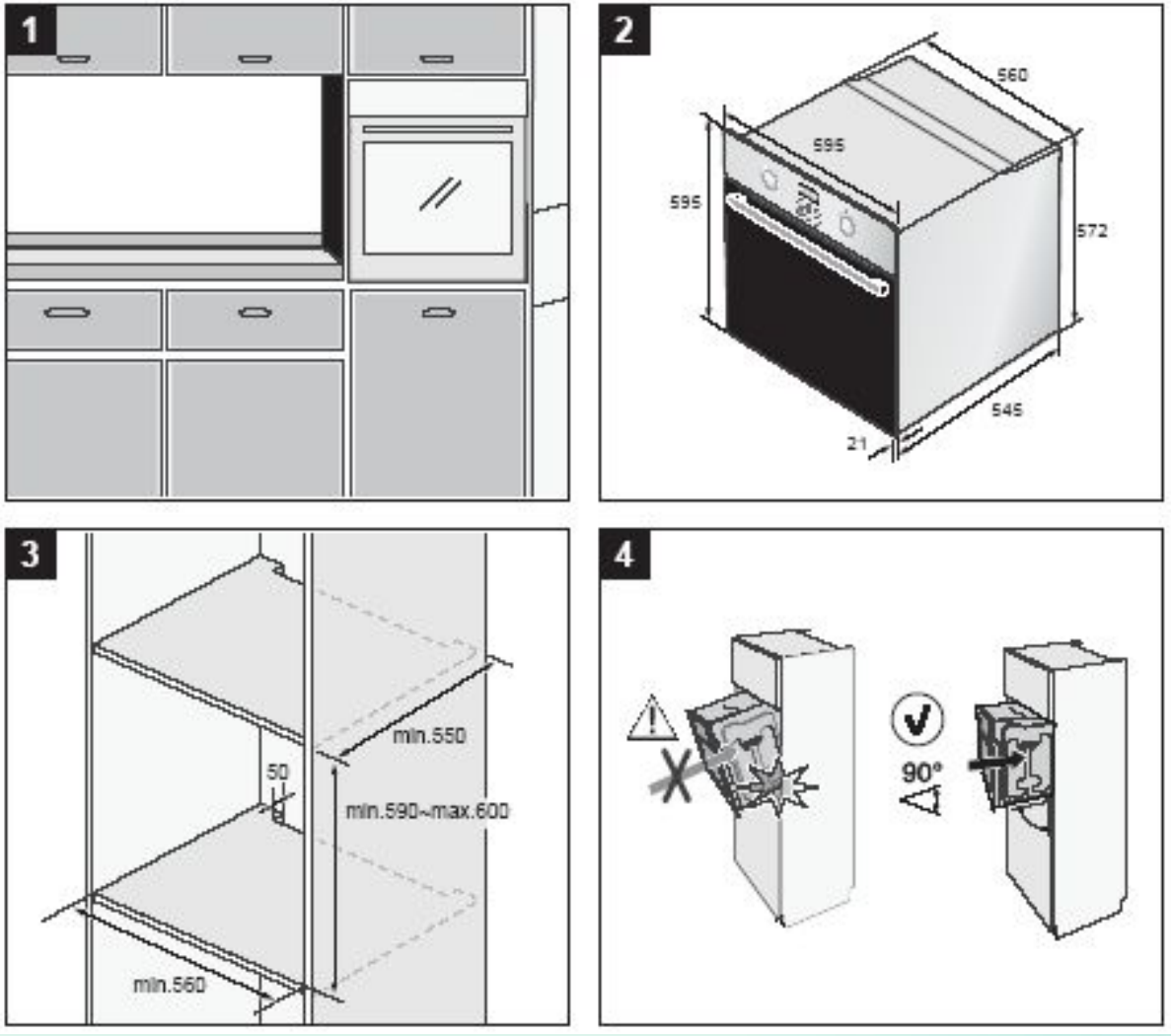
3. Installation

3-2. The work in the low cabinet



3. Installation

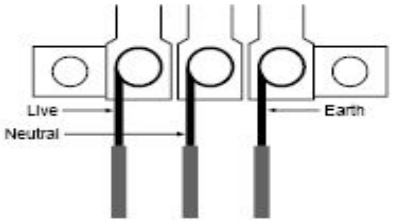
3-3. The work in the high cabinet



3. Installation

3-4. Power connection

- Connecting the oven to the power supply (H05VV-F, H05RR-F, Min 1.5~2.5 mm ^{2})
- **Connections**



Electrical connections must be made as per the connection plate fixed to the back of the appliance, by an electrical fitter who must ensure that the appliance has been connected up in accordance with fitting instructions and local regulations.

Where the appliance is not connected to the mains electricity supply by a plug, an omni polar cutout device (with a contacts gap of at least 3 mm) must be fitted on the supply side of the connection to meet safety requirements.

NOTE: When power is connected, the electronics of the oven are initialized; this neutralizes the lighting for a few seconds. The electric cable (H05 RR-F or H05VV-F) must be long enough for it to be connected to the built - in oven standing on the floor in front of its unit.

Open the back cover of the oven at the bottom (using a flat - bladed screwdriver), completely unscrew the connection screw and the cable clamp before fitting the conducting wires into the appropriate terminals.

The earth wire must be connected to the terminal of the oven.

If the oven is connected to he power supply by a plug, this must remain accessible once the oven has been fitted.

We cannot accept any liability in the event of an accident resulting from non - existent or faulty earthing.

4. Function

4-1. Main function

Oven functions

	**Convection** The heat generated by the convection is shared evenly in the oven by fans. This function should be used for frozen dishes and baking. Suggested temperature : 170°C
	**Top Heat + Convection** The heat generated by the upper heating system and the convection is shared evenly in the ven by fans. This function should be used for roasting crusty dishes like meat. Suggested temperature : 190°C
	**Conventional** Heat is emitted from the upper and lower heating system. This function should be used for standard baking and roasting of almost any type of dishes. Suggested temperature : 200°C
	**Bottom Heat Convection** The heat generated by the lower heating system and the convection is shared evenly in the oven by fans. This function should be used for pizzas, bread and cakes. Suggested temperature : 190°C
	**Large Grill** Heat is emitted from the large area grill. This function should be used for scalloped dishes like lasagne and grilling meat. Suggested temperature : Medium

4. Function

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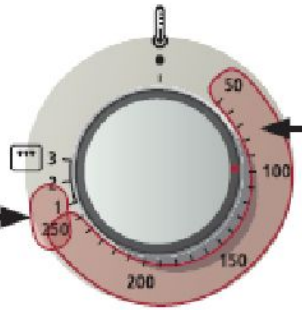
4-2. Setting the Cooking Function mode

Using the Fast Preheating(⋙) mode

If you use the **FAST PREHEATING** option, you can increase the temperature up to the set value in no time.
This will drastically shorten your waiting time until the preheating is done.
Use the **FAST PREHEATING** option to increase the temperature to the set value until the preheating is completed. Then switch to Cooking mode before proceeding.
However, you do not need to use **FAST PREHEATING** for grilling food.

Using the Cooking mode



Grill temperature
1 Low
2 Medium
3 High

Set the temperature for all cooking other than grilling.

1 Turn **Function Select Knob**, set desired time in hours.

2 Select the desired temperature by turning the **Temp Control Knob**.

If you select the Grill function and set the temperature between 50°C and 250°C, or if you select Normal Cooking mode and set the temperature between Grill 1 and 3, you are asked to reset the temperature with a buzzer and popup message.

4. Function

4-3. Other Function

Time setting

If the oven is pluged to the power suply for the first time, its display will illuminate for short time and after 3 seconds 12:00 starts to blink. Before the oven can be used the time setting must be completed.

1 Press **Time Select Knob**, hour figures blink.

2 Turn **Time Select Knob**, set desired time in hours.

3 Press **Time Select Knob**, minute figures blink.

4 Turn **Time Select Knob**, set desired time in minutes.

5 Press **Time Select Knob** to confirm.

4. Function

4-3. Other Function

Set Timer

1 Turn **Time Select Knob**, set timer time.

2 Press **Time Select Knob** to confirm.

✉ While the timer is operating, the " 0 " mark on the left side of the screen rotates to indicate the process.
If you want to stop the timer operation, set the timer to 0:00.
While it is operating, press the Time selection knob to display the clock for the current time.

5. Service Information

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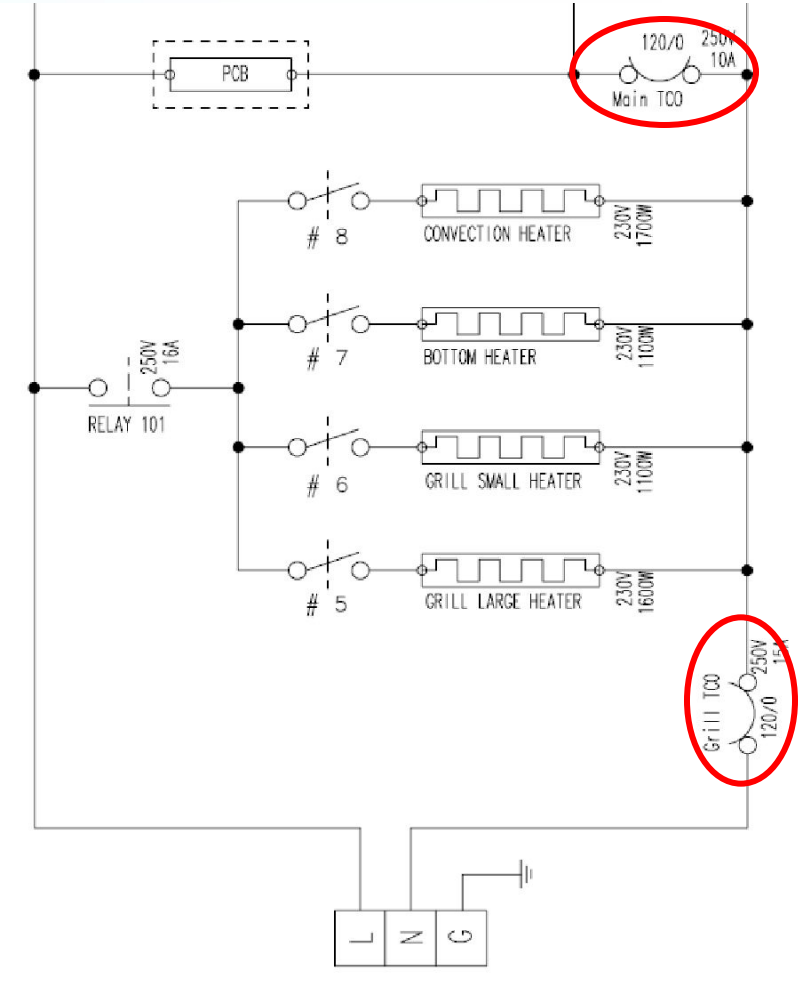
5-1. Thermo cut-out

Two pieces of thermo cut-out are mounted in order to monitor abnormal operation of the oven and make the oven stop safely.



5. Service Information

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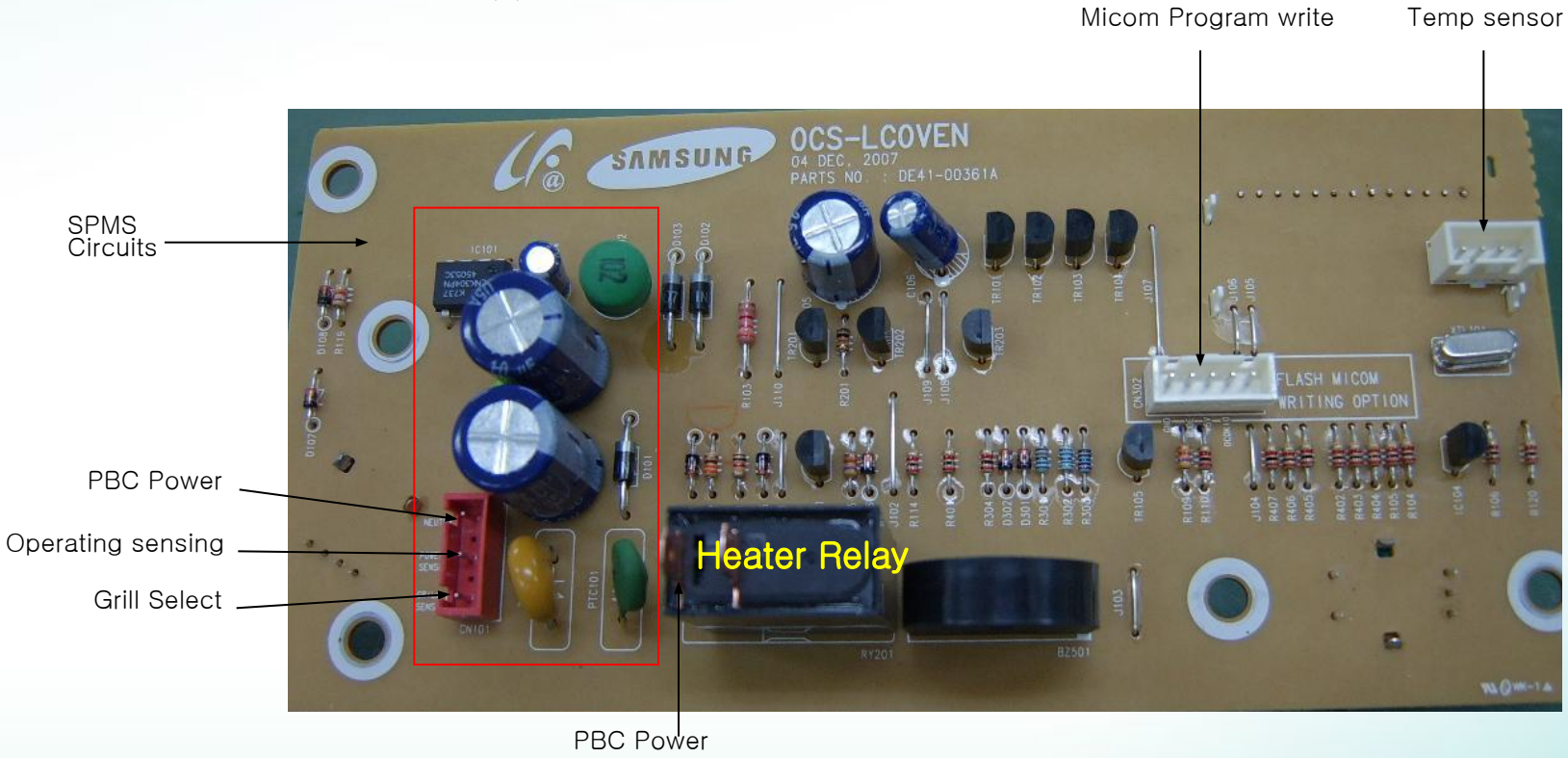
5-2. PCB

The operating power of Main PCB performs stable operation at a large range of Input Power from 100V to 270V with applied to SMPS circuits.



Please cut off the Main Power during dissamblling PCB or checking the part of PCB. Because there is no Insultion-Trans bewteen Main-Power and 2nd Low-Voltage
(“N” Line of “Main-Line is connected directly with Low voltage “-” Line)

5. Service Information

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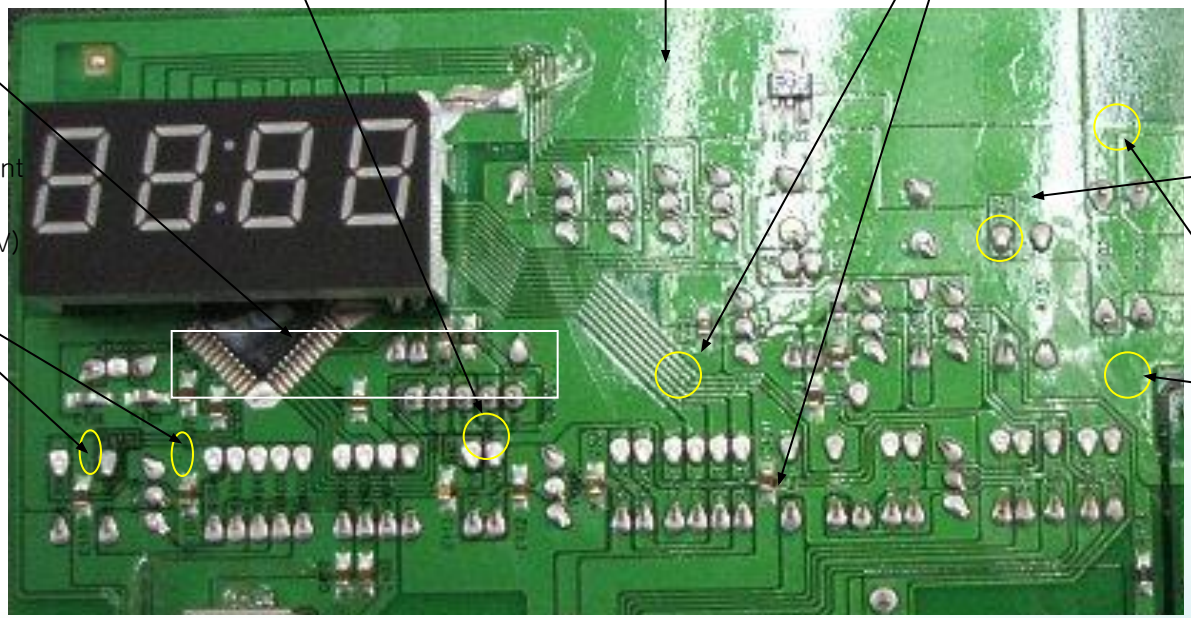
5-2. PCB



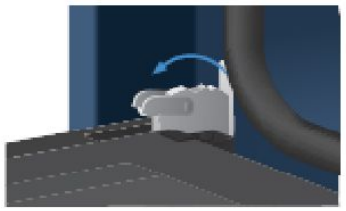
Please cut off the Main Power during dissamblling PCB or checking the part of PCB. Because there is no Insultion-Trans bewteen Main-Power and 2nd Low-Voltage
(“N” Line of “Main-Line is connected directly with Low voltage “-” Line)

6. Disassembly and Reassembly

6 - 1 Replacement of Door Assembly

Door Removal

The removable cover casing is coated with a dark gray catalytic enamel this can become coated with oil and fat distributed by circulating air during convection heating. These deposits will burn off at oven temperatures of 200 °C and higher, for example, while baking or roasting. Higher temperatures will result in faster burning.



1 Open the door and flip open the clips at both hinges completely.

2 Close the door by approximately 45°. With both hands, grasp the sides of the oven door at its middle and pull-lift until the hinges can be taken out.

6. Disassembly and Reassembly

revised Page

6 - 2 Replacement of Door Glass

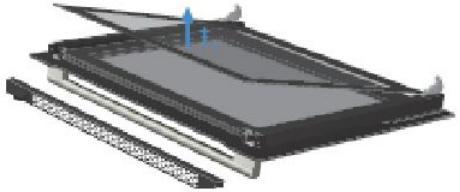
WARNING

Whenever the door is separated from the oven, the clips should always be turned over. When the door is mounted, if some of the parts (Door glass or other parts) are removed from the door, it can cause injury due to sheet.

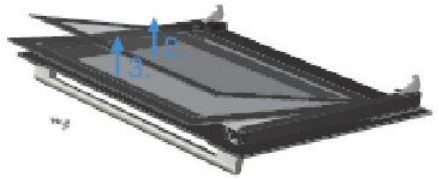
Door Glass Removal

The oven door is equipped with three sheets of glass placed against each other. These sheets can be removed for cleaning.

1 Remove the two screws on the left and right sides of the door.



2 Detach the covering and remove glass 1 from the door.



3 Lift glass 2 and remove the two spring-brackets from the top of the sheet, then remove glass 3. Clean the sheets with warm water or washing-up liquid and polish dry them with a soft clean cloth.

✉ The Door-Glass is different from 2EA to 4EA model by model.
But, the method of the disassembly and assembly is same.

4. Disassembly and Reassembly

6 – 3 Replacement of the rear oven Lamp Bulb

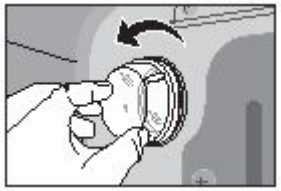
6-3-1 Take off the cap by turning counterclockwise.

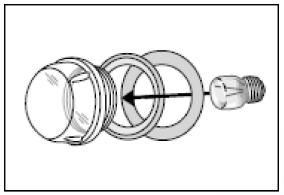
6-3-2 Remove the metal ring and the sheet ring and clean the glass cap.

6-3-3 If necessary, replace the bulb with a 25 watt, 230 V, 300 °C heat - resistant oven light bulb.

6-3-4 Fit the metal and the sheet ring to the glass cap.

6-3-5 Replace the glass cap.





6. Disassembly and Reassembly

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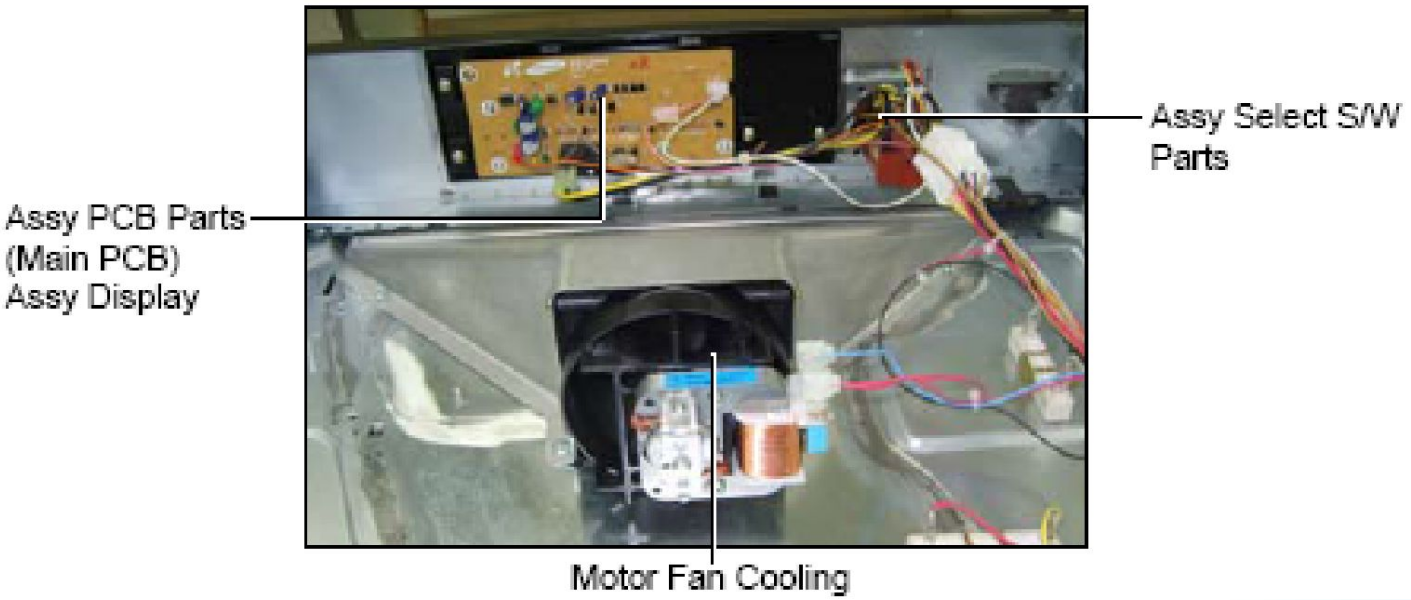
6 – 4 Replacement of Assy Control Box



6 – 4 – 1 Remove a connector from the main PCB.

6. Disassembly and Reassembly

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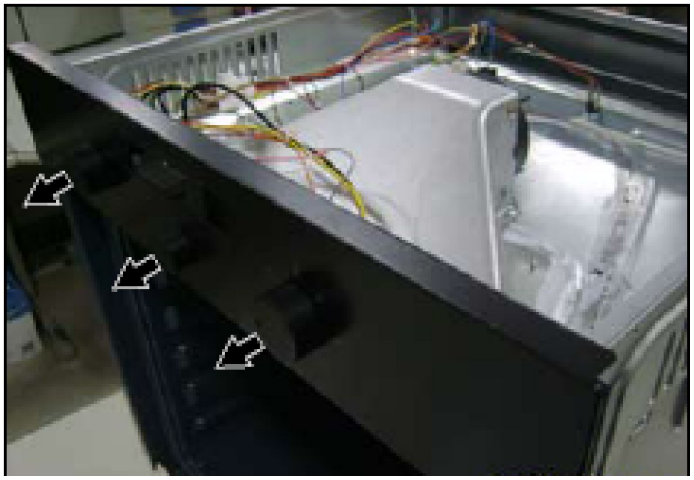
6 – 4 Replacement of Assy Control Box

6-4-2. Take off the three knob dial.



6 – 4 – 3 Remove two screws at both sides of assy control box, lift up assy control box and pull forward to separate.

6. Disassembly and Reassembly

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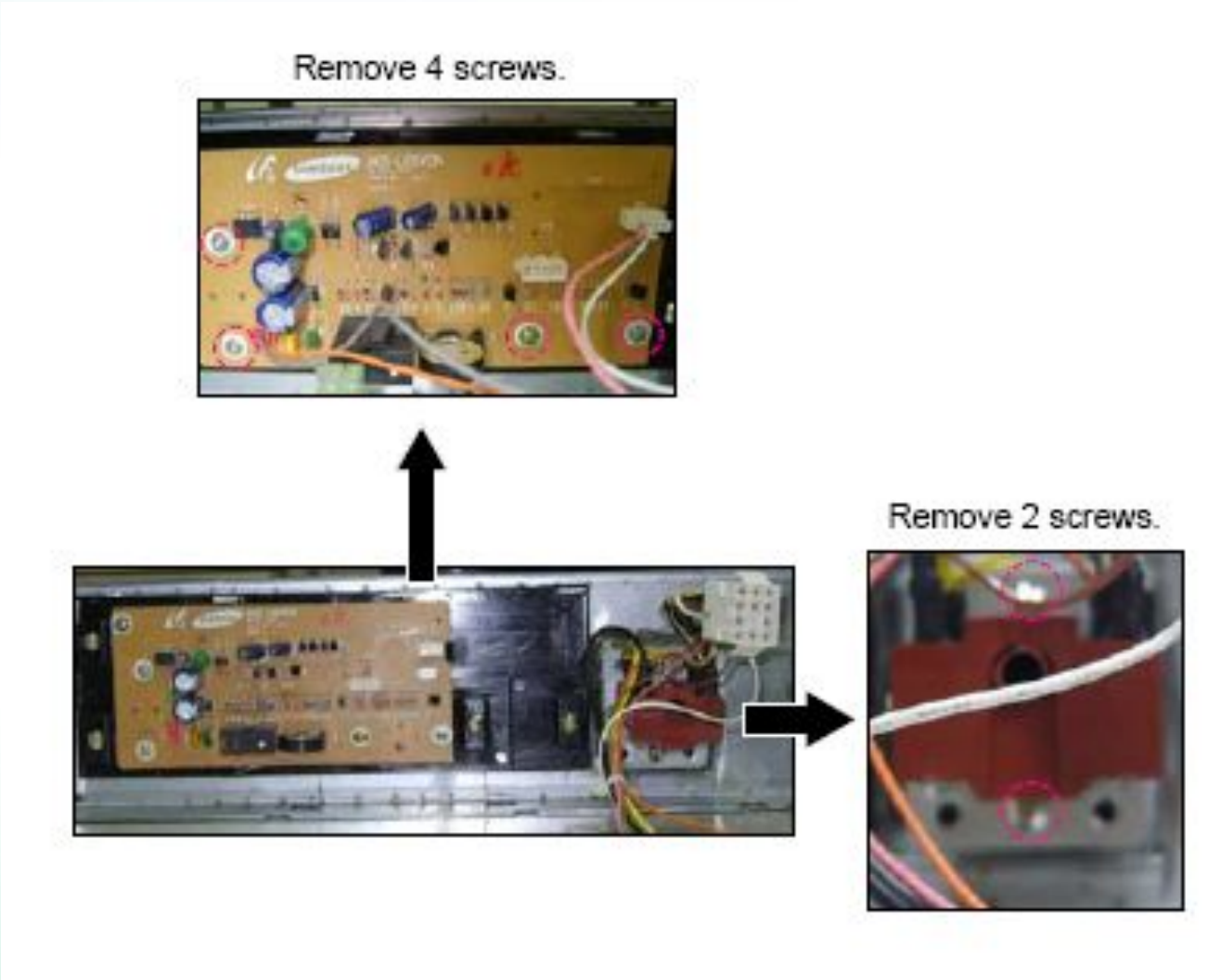
6 – 4 Replacement of Assy Control



6. Disassembly and Reassembly

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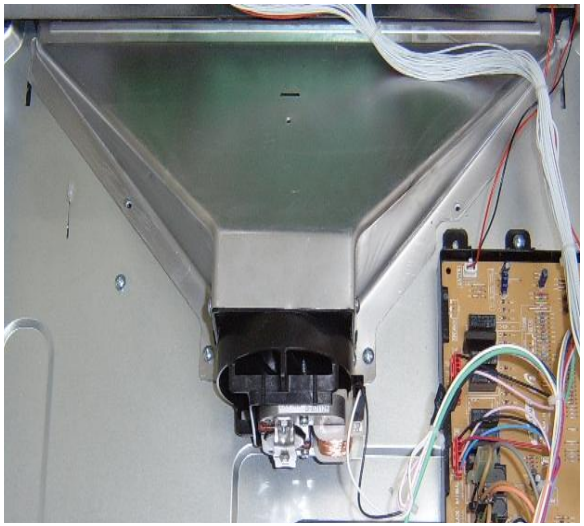
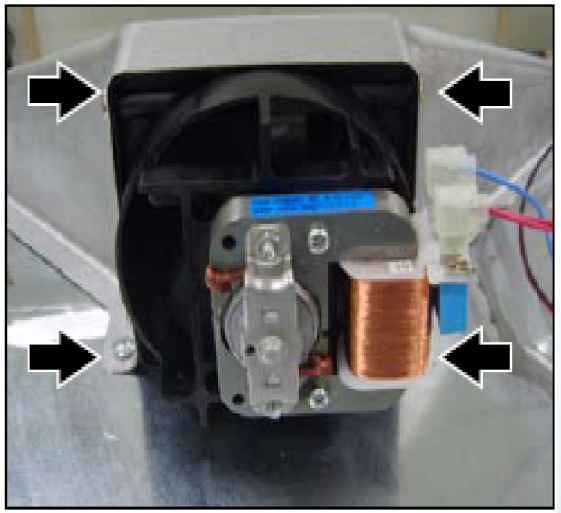
6 – 5 Replacement of Motor Fan Cooling

6 – 5 – 1 Remove four screws from ass'y cover cooling motor both side..





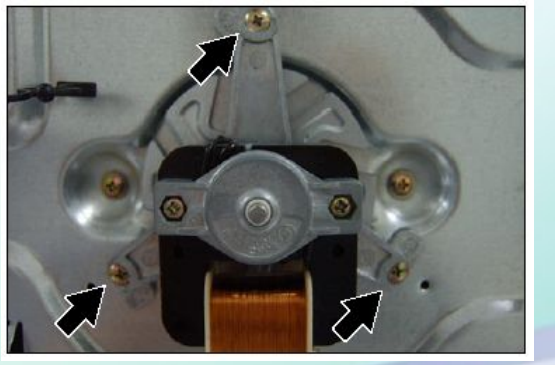
6. Disassembly and Reassembly

6 – 6 Replacement of Motor Convection

6 – 6 – 1 Remove four screws at the back inside cavity to separate the cover casing.

6 – 6 – 2 Turn flange nut to the left to release and separate spacer fan convection and fan convection.

6 – 6 – 3 Remove three screws securing motor convection.



6. Disassembly and Reassembly

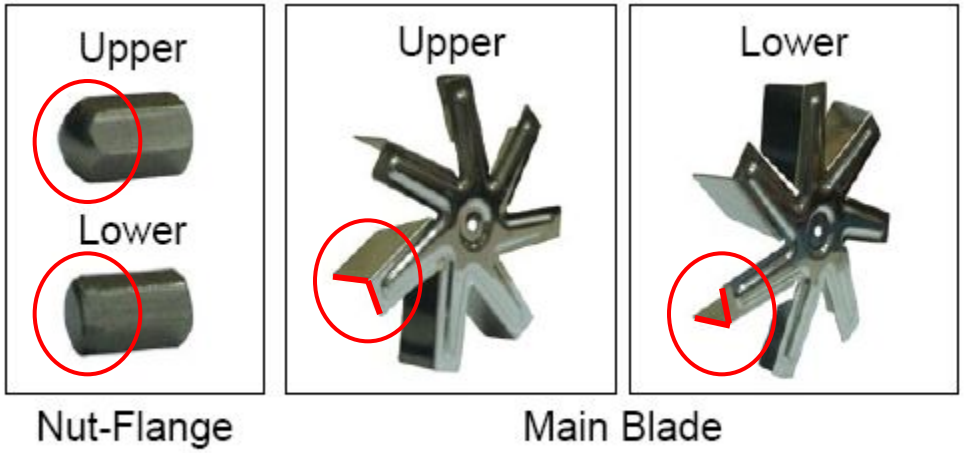
6 – 6 Replacement of Motor Convection

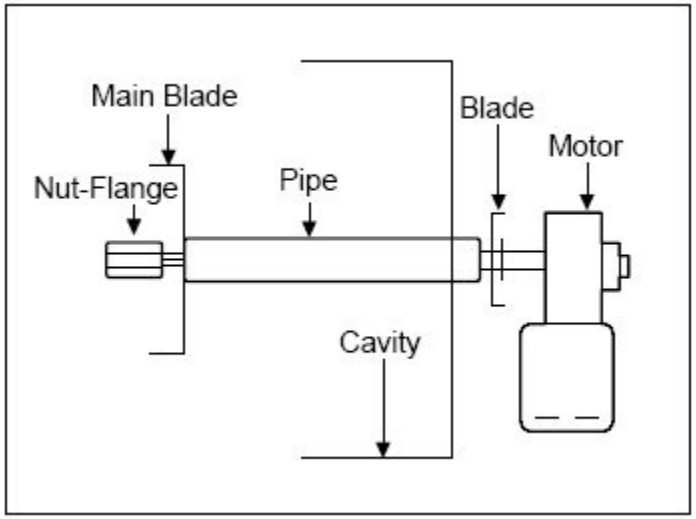
❖ **Reference**

Convection fan is turn in the opposite direction each other for improvement cook performance.

Upper fan is turn in counterclockwise direction, Lower fan is fan turn in clockwise direction there for convection fan direction and net-flange are opposite each other.

Convection fan is indicated (U),(L) and net-flange is different the head shape.

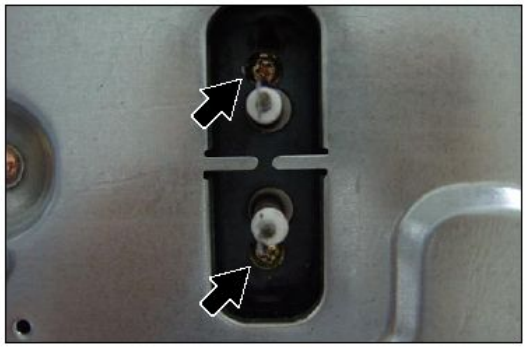




6. Disassembly and Reassembly

6 - 7 Replacement of Heater Convection

6 - 7 - 1 Remove two screws securing heater convection twin at the rear.

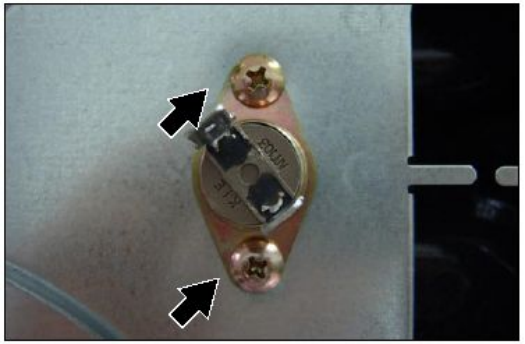


6 - 7 - 2 Pull the securing bracket at the left forward, and pull it toward the left to separate heater convection twin.

6. Disassembly and Reassembly

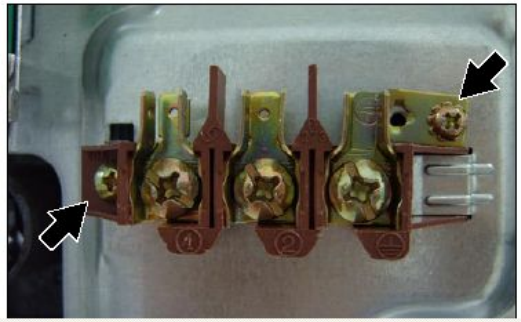
6 – 8 Replacement of Thermostat

6 – 8 – 1 Remove two screws.



6 – 9 Replacement of Terminal Block

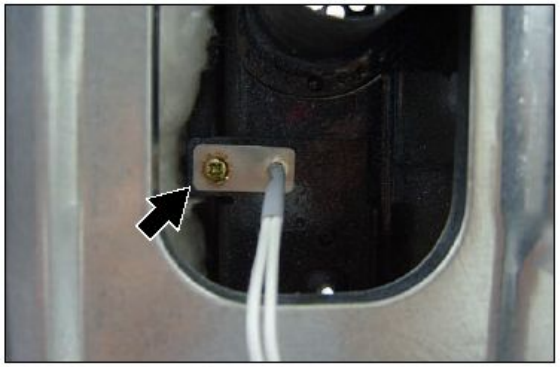
6 – 9 – 1 Remove two screws.



6. Disassembly and Reassembly

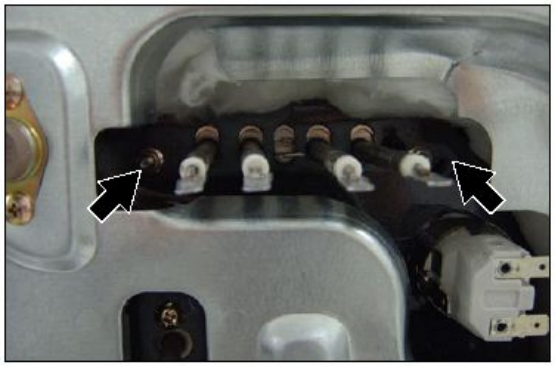
6 – 10 Replacement of Sensor Thermistor

6– 10 – 1 Remove one screw.



6 – 11 Replacement of Heater Grill

6 – 11 – 1 Remove each nut flange at right and left sides.

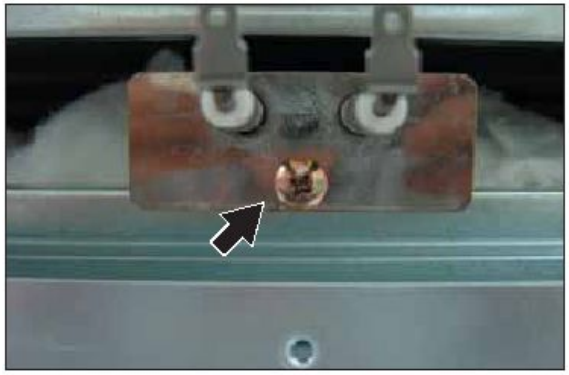


6 – 11 – 2 Remove one screw and pull forward to separate it.

6. Disassembly and Reassembly

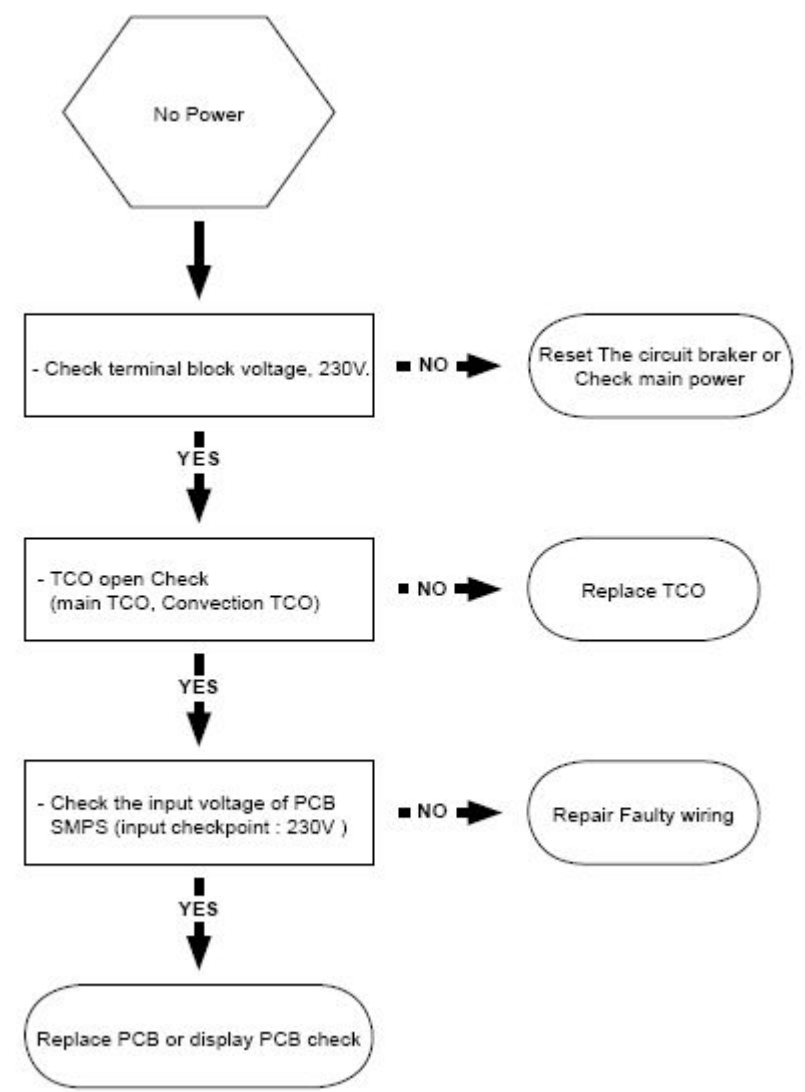
6 – 12 Replacement of Heater Bottom

6 – 12 – 1 Remove one screw and pull forward to separate it.



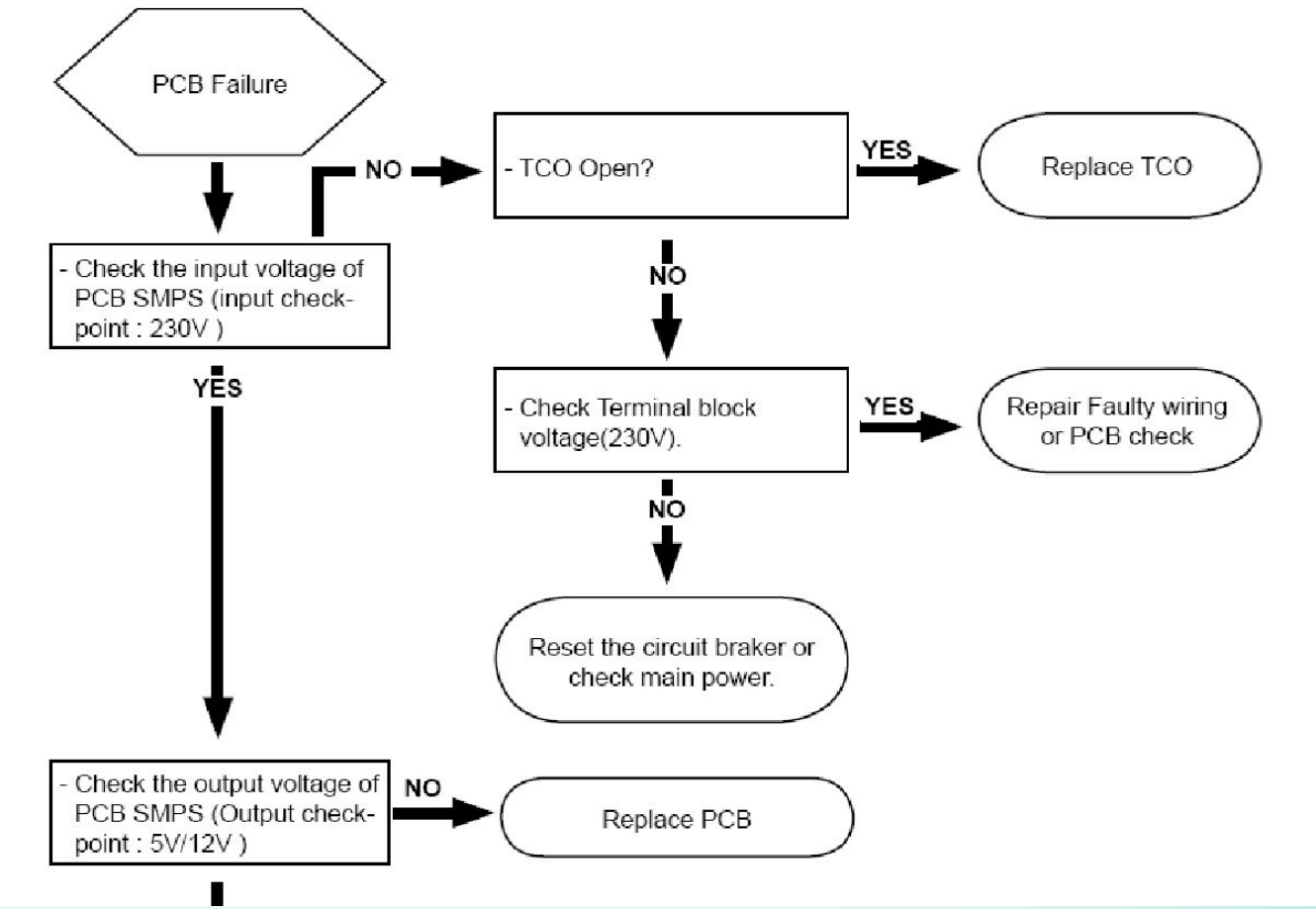
7. Troubleshooting

7-1 Power Failure



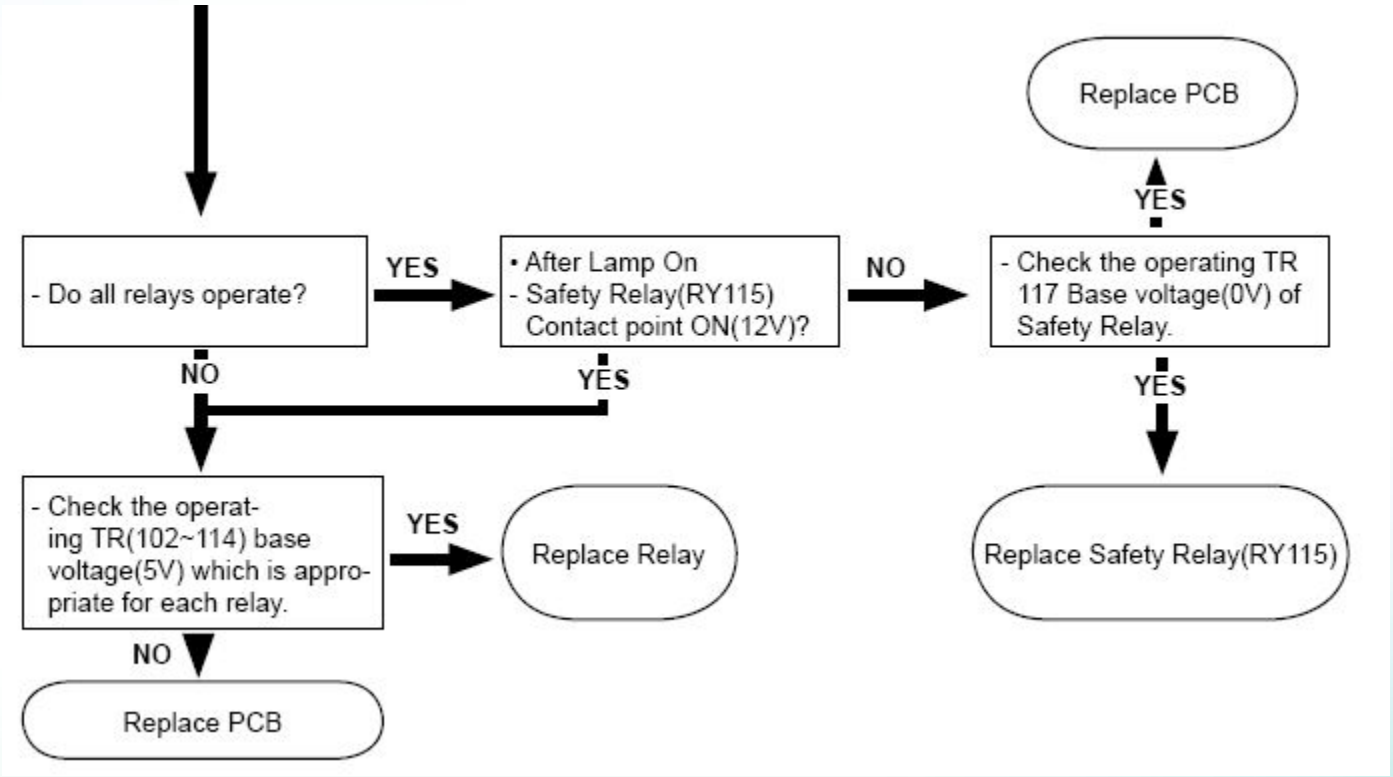
7. Troubleshooting

7-2 PCB Failure



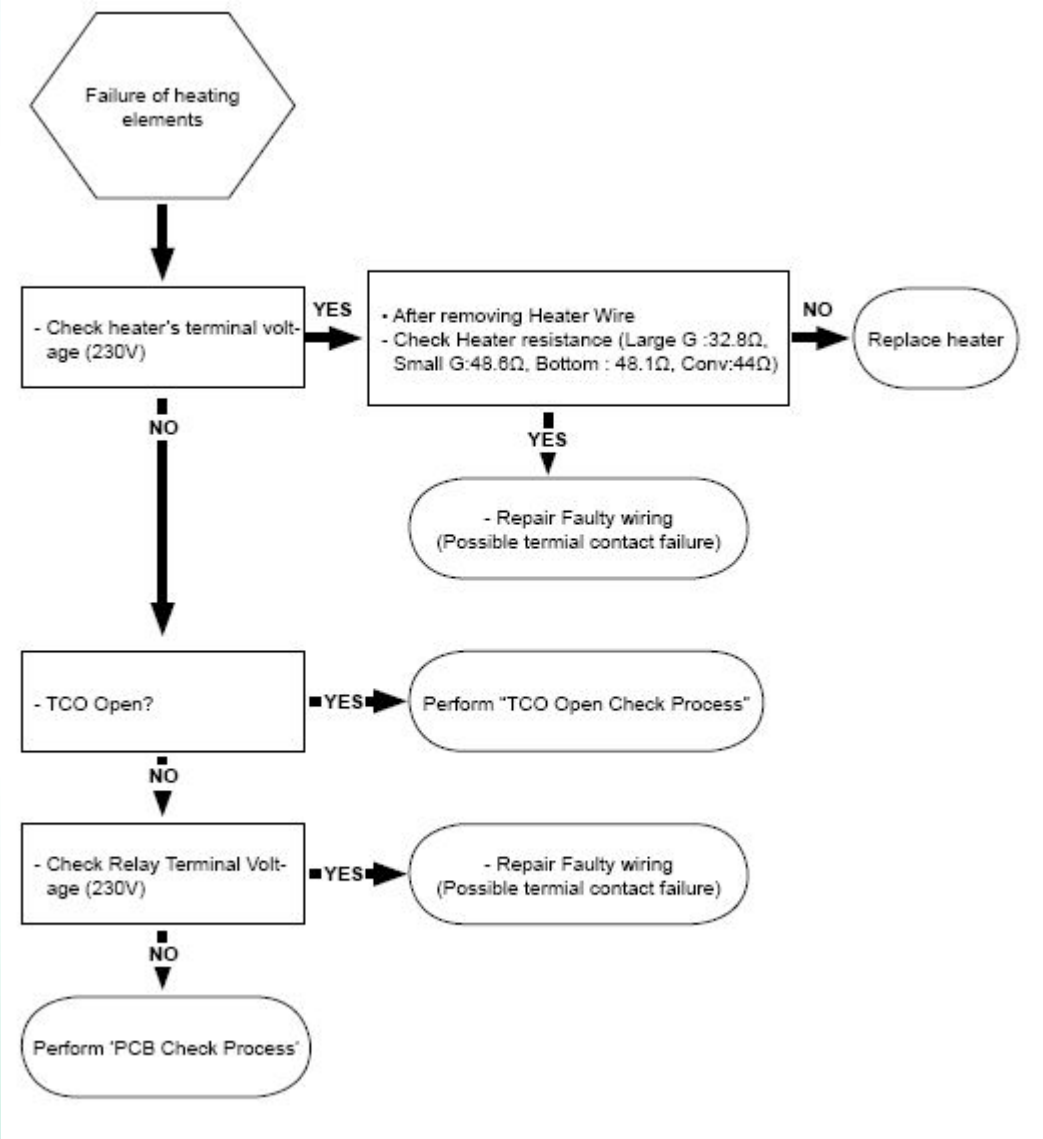
7. Troubleshooting

7-2 PCB Failure (Continued)



7. Troubleshooting

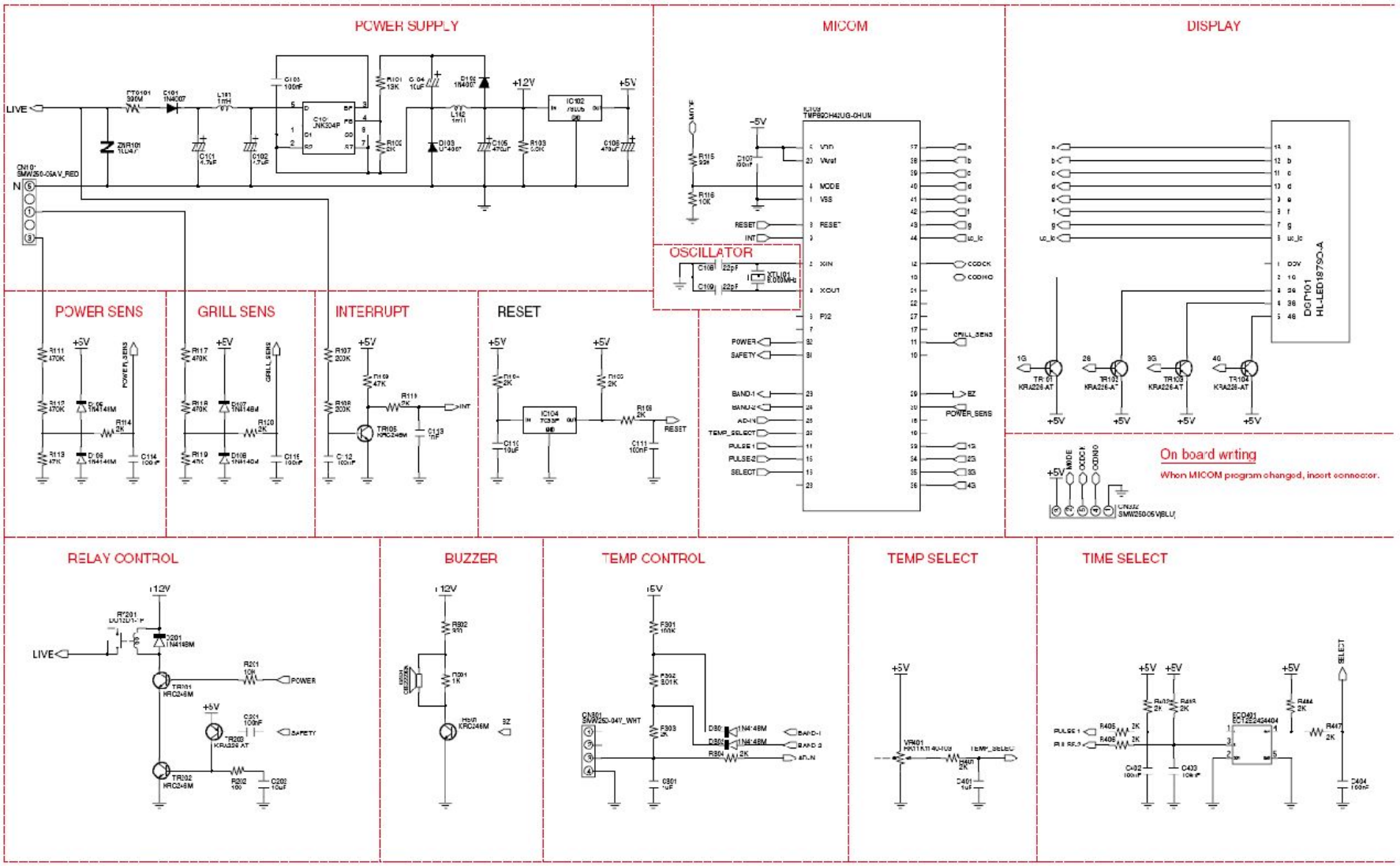
7-3 Failure of heating elements



8. Schematic Diagram

revised Page

8-1 Main

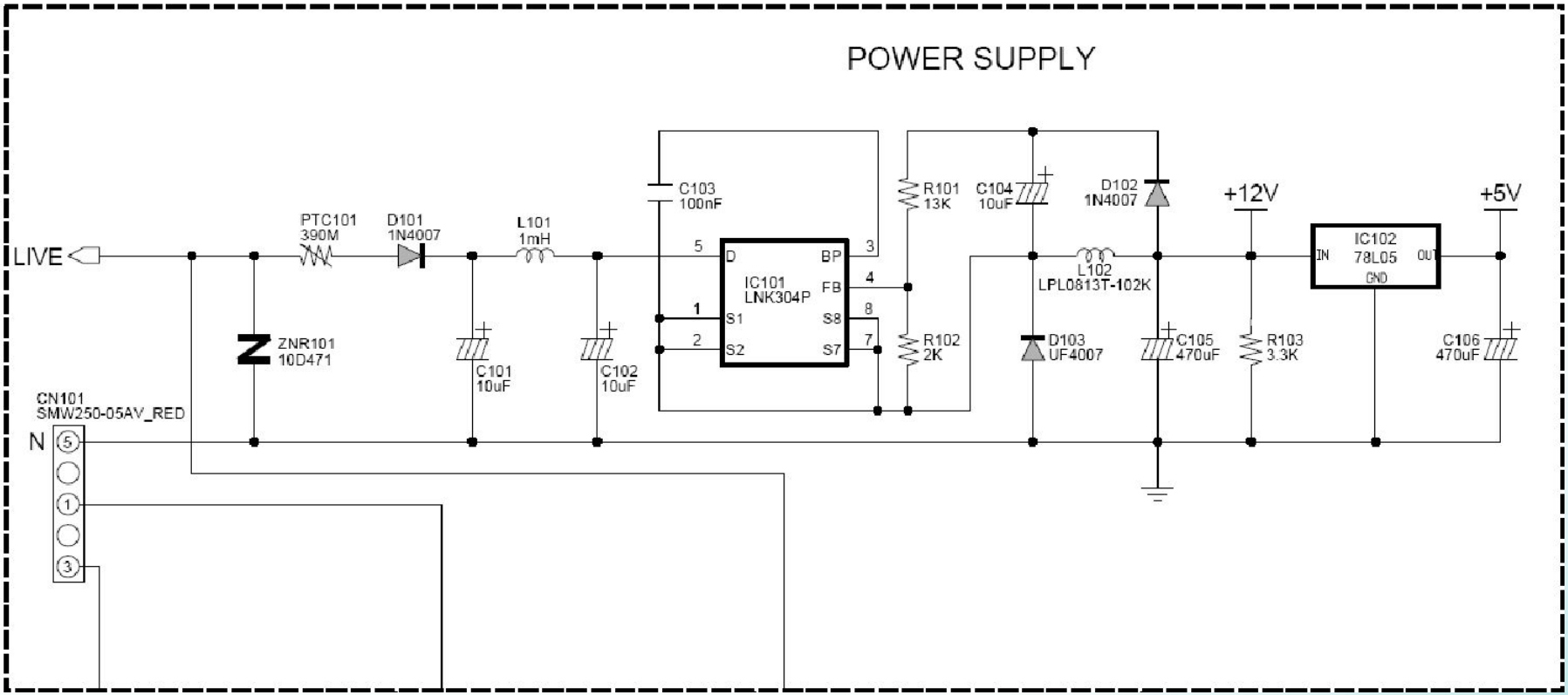


Please cut off the Main Power during dissamblling PCB or checking the part of PCB. Because there is no Insultion-Trans bewteen Main-Power and 2nd Low-Voltage

8. Schematic Diagram

revised Page

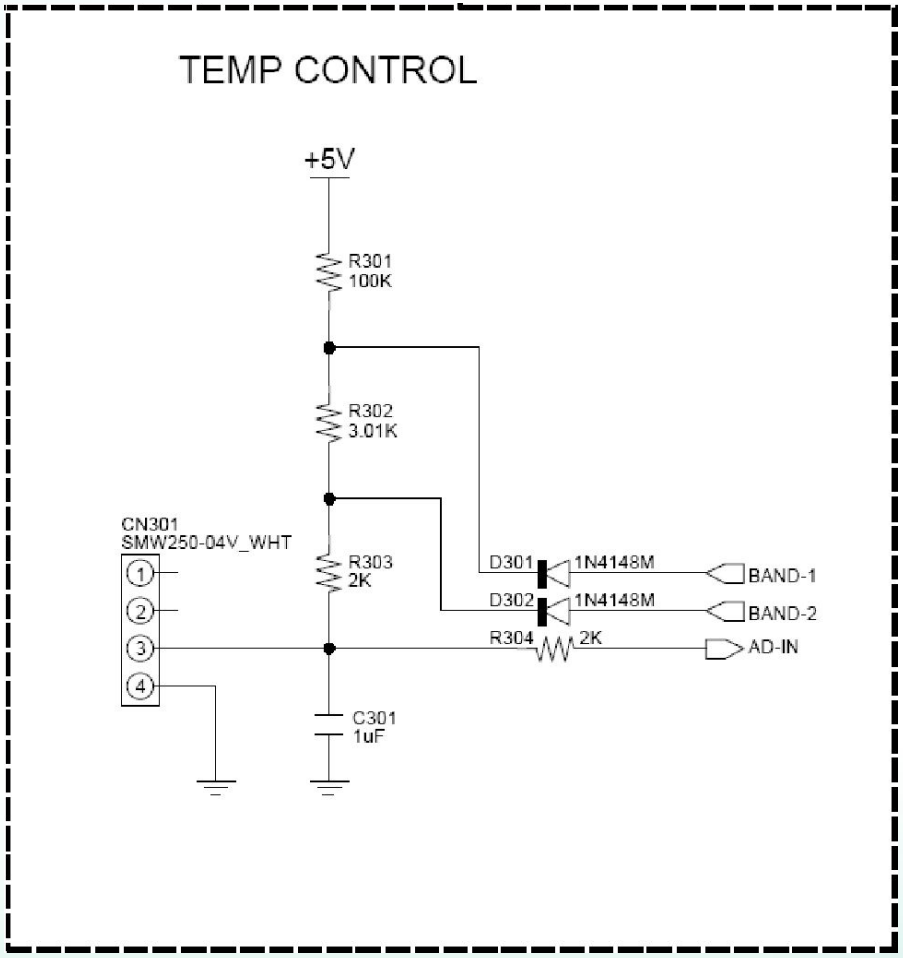
8-2 SMPS Diagram



8. Schematic Diagram

revised Page

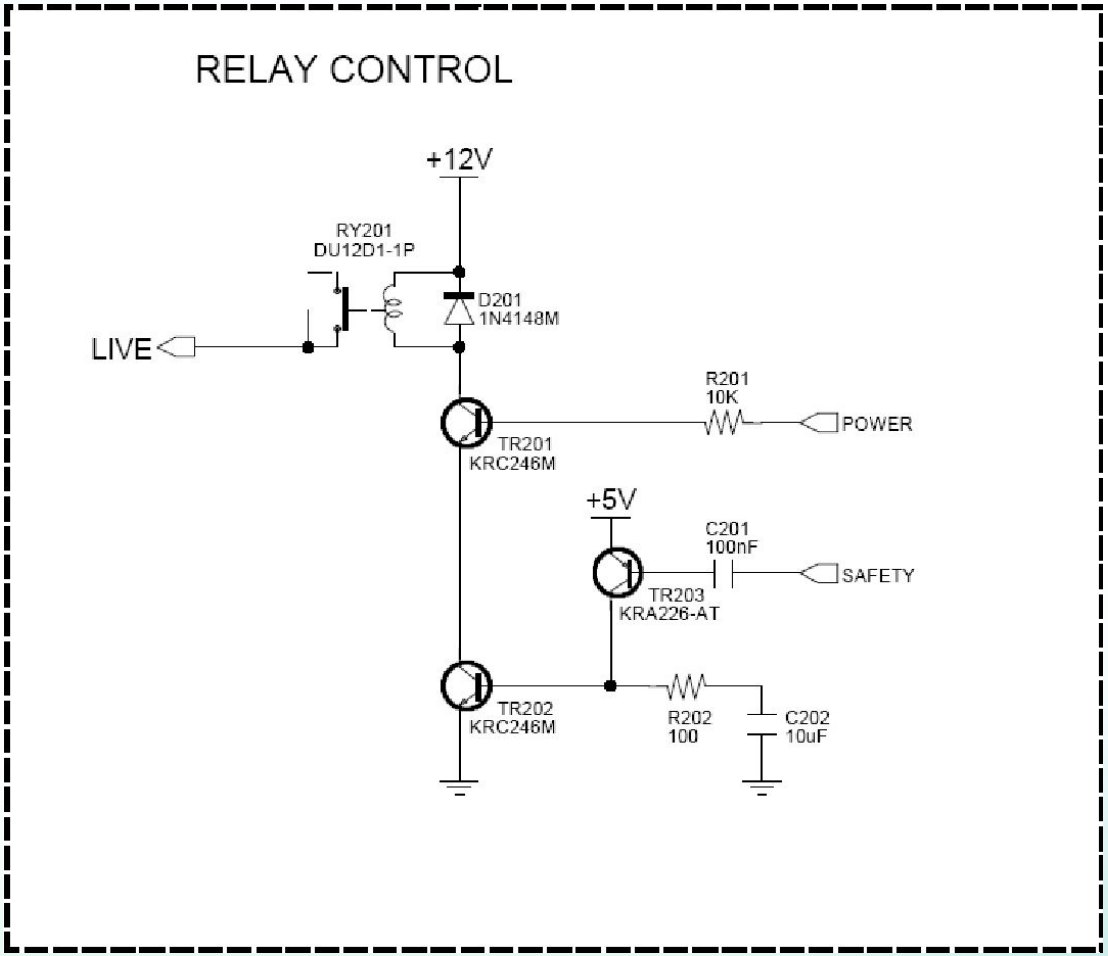
8-3 Temp Sensor



8. Schematic Diagram

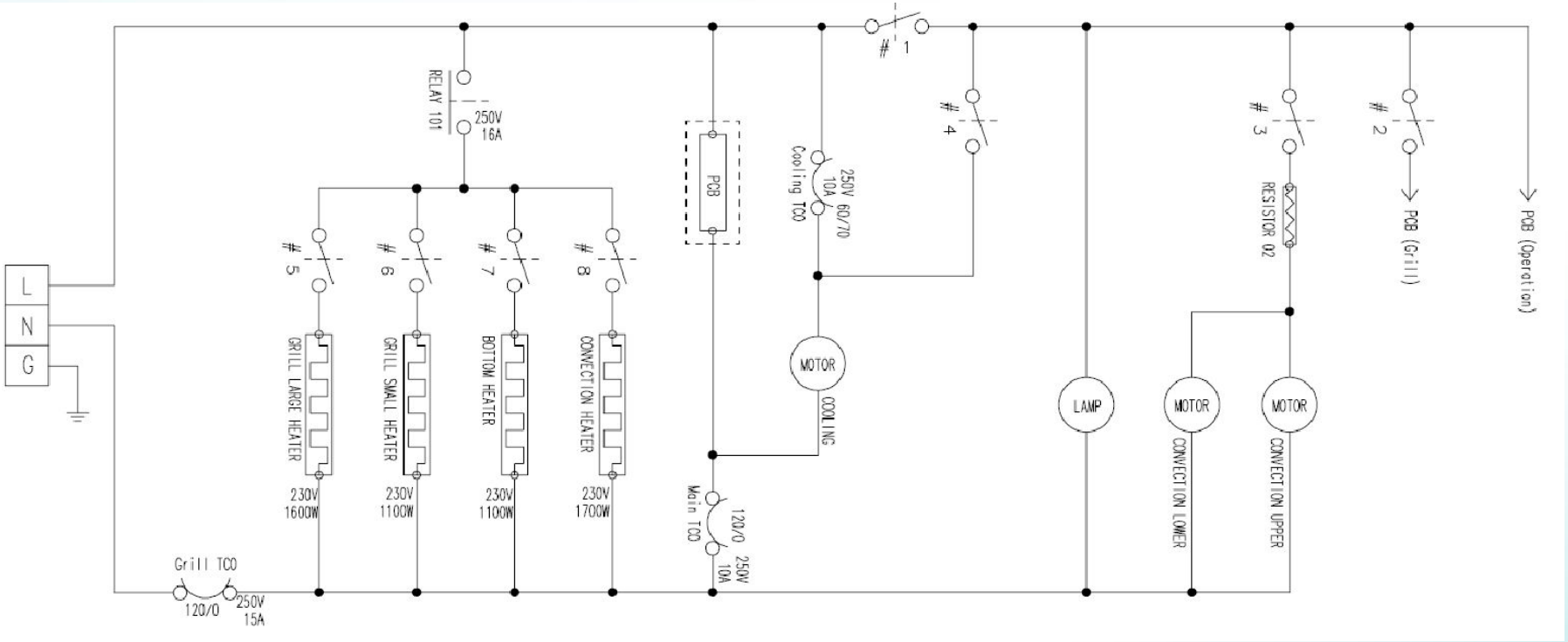
revised Page

8-4 Relay Operation Diagram



9. Wiring Diagram

revised Page



10. Q&A

10-1 Checkpoints before service request

Symptom	Checkpoints
Oven fails to power on.	Check whether the main circuit breaker is off or an electricity failure.
Temperature of the place for use	Temp Sensor works at -5 °C above, but it may affect its accuracy according to the ambient temperature. The range of 15~30 °C for use is recommended.
Error Code	5 Error Codes are stored. Disconnect power after checking by checking methods. (The error codes stored are deleted if power off.)

10. Q&A

10-2 Customer inquiry case and countermeasures

FAQs and Troubleshooting

What should I do if the oven doesn't heat up?

Check to see if one of the following actions resolves the issue:

- The oven may not be switched on. Switch the oven on.
- The clock may not be set. Set the clock (see section "Time Setting").
- Check to see if the required settings have been applied.
- A household fuse may have blown or a circuit breaker may have tripped. Replace the fuses or reset the circuit. If this happens repeatedly, call an authorised electrician.

What should I do if, even though the oven function and temperature have been set, the oven does not heat up?

There may be problems with the internal electrical connections. Call your local service centre.

What should I do if an error code appears and the oven does not heat up?

There is a fault in the internal electrical circuit connection. Call your local service centre.

What should I do if the time display is blinking?

There was a power failure. Set the clock (see section "Time Setting").

What should I do if the oven light doesn't illuminate?

The oven light is faulty. Replace the oven light bulb.

What should I do if the oven's fan is running without having been set?

Following use, the oven's fan runs until the oven has cooled down. Call your local service centre if the fan continues to run after the oven has cooled down.

Thank You