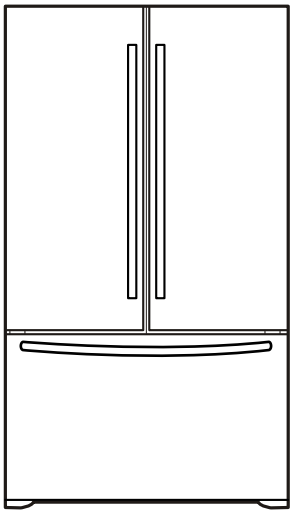
REFRIGERATOR

SERVICE MANUAL

CAUTION
BEFORE SERVICING THE UNIT,
READ THE SAFETY PRECAUTIONS IN THIS MANUAL.



MODELS:
LFC20760**

CONTENTS

SAFETY PRECAUTIONS

Please read the following instructions before servicing your refrigerator.

1.Check the refrigerator for current leakage.

2.To prevent electric shock,unplug before servicing.

3.Always check line voltage and amperage.

4.Use standard electrical components.

5.Don't touch metal products in the freezer with wet Hands.This may cause frost bite.

6.Prevent water from spiling on to electric elements or the Machine parts.

7.Before tilting the refrigerator,remove all materials from On or in the refrigerator.

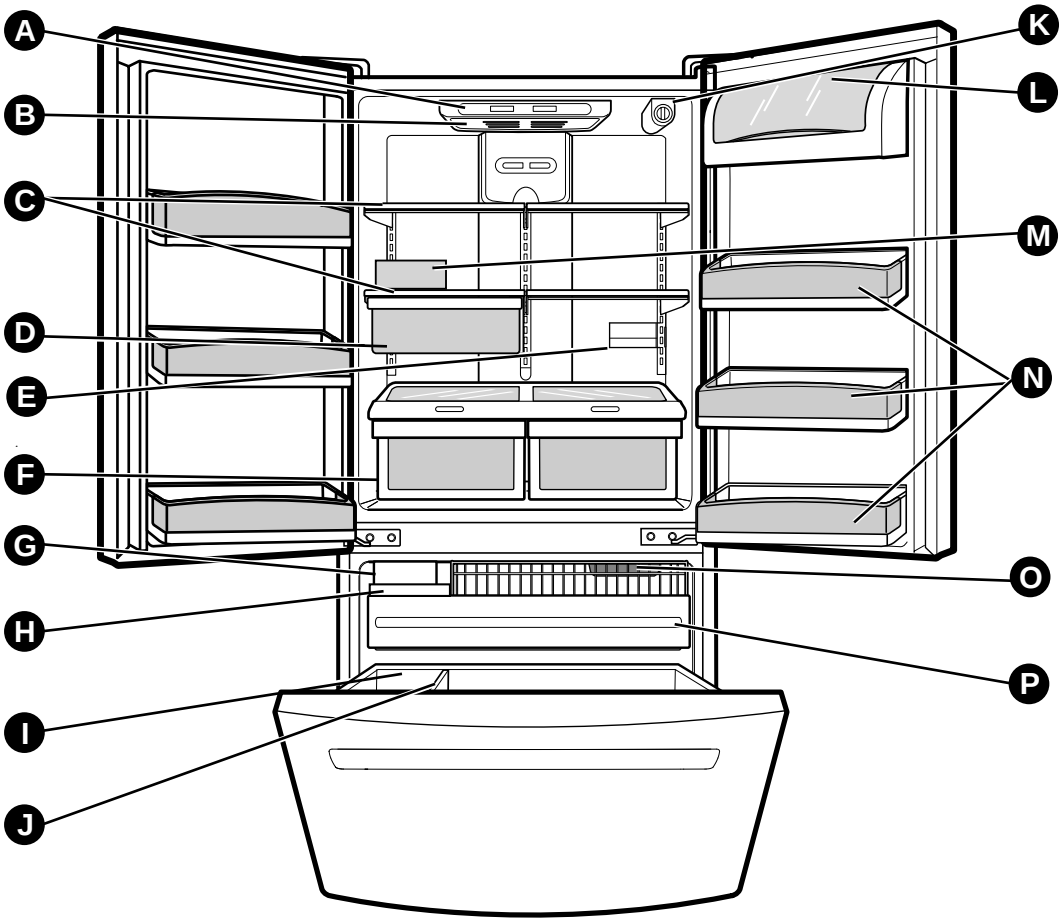
8.When servicing the evaporator,wear gloves to prevent Injuries from the sharp evaporator fins.

9.Service on the refrigerator should be performed by a Qualified technician.Sealed system repair must be Performed by a CFC certified technician.

1. SPECIFICATIONS

SPECIFICATIONS \ MODELS		LFC20760ST LFC20760SW LFC20760SB
GENERAL FEATURES	CAPACITY CUFT;(F/R/T)	6.39/13.21/19.6
	DIMENSIONS in;(W*H*D)	29.88*68.43*32.17
	WEIGHT lb;	270.28
	HANDLE TYPE	Vista-Handle
	REVERSIBLE DOOR	NO
	DOOR FINISH	STAINLESS/ VCM/ PCM
	REFRIGERANT/gr	R134a 120±3
FREEZER	ICE TRAY	Ice bank (1ea)
	SHELF	NO
	BASKET DOOR	NO
	LAMP	YES (1) 40W/blue
REFRIGERATOR	TRAY MEAT	YES
	SHELF	4Fix
	MAGIC CRISPER	NO
	LAMP	YES (2) 40W/blue
	GUIDE BOTTLE	YES (2)
	DOOR COOOLING	NO
	TRAY VEGETABLE	YES (NORMAL)
	BASKET DOOR	3LEFT + 3RIGHT

2. PARTS IDENTIFICATION



Use this section to become more familiar with the parts and features.

NOTE: This guide covers several different models. The refrigerator you have purchased may have some or all of the items listed below. The locations of the features shown below may not match your model.

- **A** Digital Sensor Control *
- **B** Refrigerator Light
- **C** Shelves
- **D** Chef Fresh / Snack Pan
- **E** Can Dispenser *
- **F** Optibin Crisper
  Keeps fruits and vegetable fresh and crisper
- **G** Customcube Icemaker *
- **H** Ice Tray *
- **I** Durabase
- **J** Divider
- **K** Filter (Inside)*
- **L** Dairy Bin
- **M** Egg Box *
- **N** Refrigerator Door Rack
- **O** Freezer Light
- **P** Pull out Drawer

*on some models

3. DISASSEMBLY

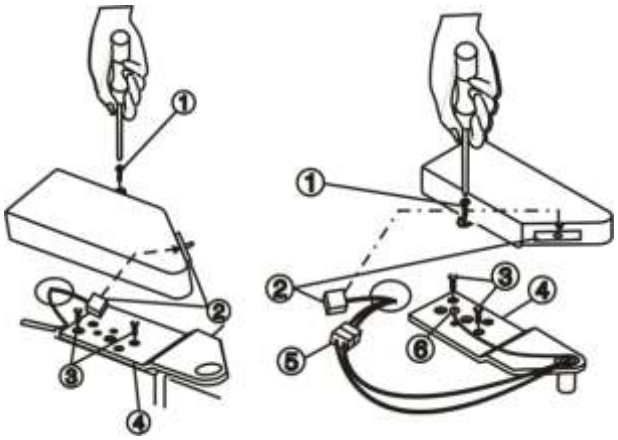
3-1 DOOR

▶ Left Door

- Loosen the cover screw (1).
- Disconnect door switch wire (2).
- Loosen hinge bolts (3).
- Lift off the top hinge (4).
- Place the door on a non-scratching surface with the inside up.

▶ Right Door

- Loosen the cover screw (1).
- Disconnect door switch wire (2).
- Disconnect wire harness (5).
- Loosen hinge bolts (3).
- Loosen ground screw (6).
- Lift off the top hinge (4).
- Place the door on a non-scratching surface with the inside up.



Left **Right**

Figure 1

Door Gasket Removal

1. Remove door frame cover

Starting at top of cover and working down, snap cover out and away from door.

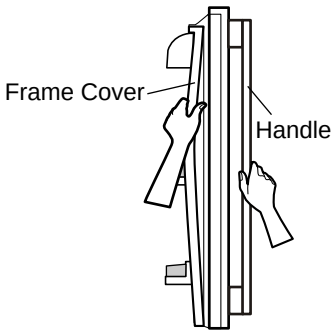


Figure 2

2. Remove gasket bracket clips

There are two clips on each door. Start bracket removal near one of the middle clips.

1) Pull gasket back to expose gasket bracket clip and door frame.
2) Insert a flat tip screwdriver into seam between gasket bracket and door frame and pry back until clips snaps out.
3) Continue prying back along seam until all clips snap out.

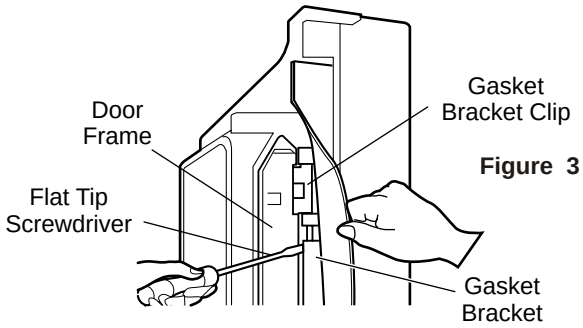


Figure 3

3. Remove gasket

Pull gasket free from gasket channel on the three remaining sides of door.

Figure 4

Door Gasket Replacement

1. Insert gasket bracket clips

1) Insert gasket bracket edge beneath door frame edge.
2) Turn upper gasket bracket spring so that both spring ends are in the door channel.
3) Push in clip until you hear it snap securely into place.

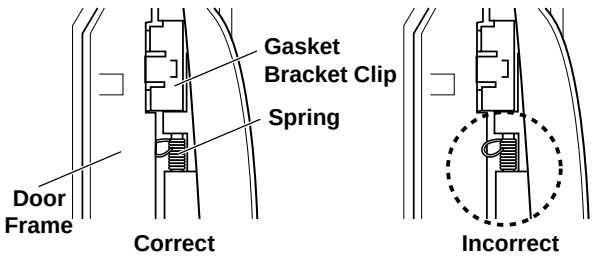


Figure 5

4) Push in remaining two clips until you hear each snap securely into place.

Note: Make sure that no part of gasket bracket edge protrudes from beneath door frame edge.

2. Insert gasket into channel

1) Snap gasket assembly into the door bracket.

<Inserting the Gasket Assembly into the Bracket Door>

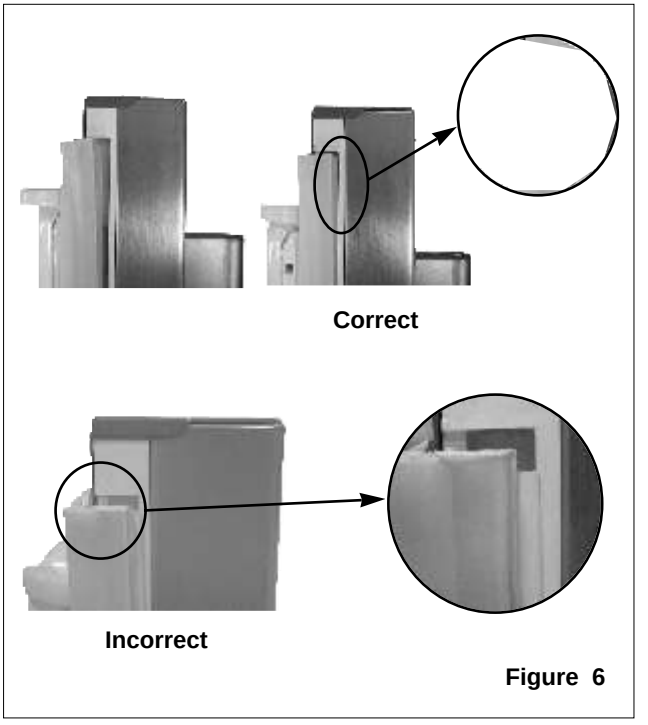


Figure 6

2) Press gasket into channels on the three remaining sides of door.

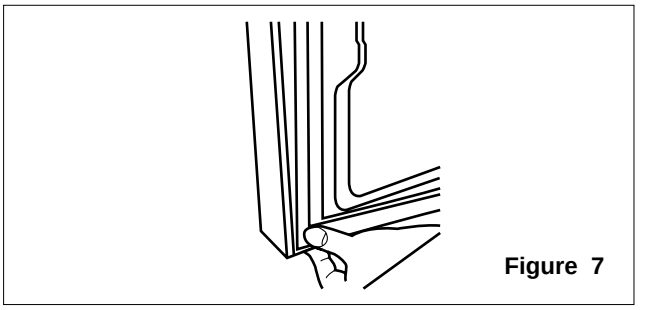


Figure 7

3. Replace door frame cover

Starting at top of cover and working down, snap cover back into door.

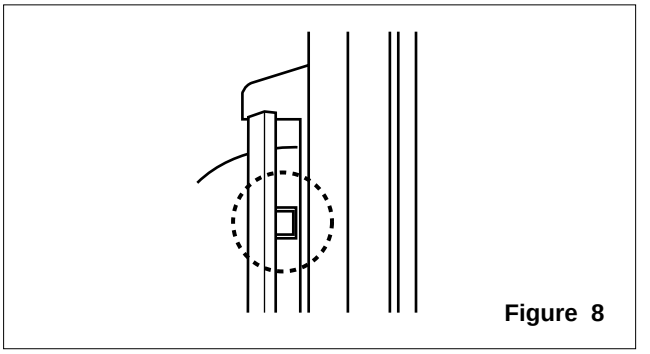


Figure 8

3-2 DOOR ALIGNMENT

If the space between your doors is uneven, follow the instructions below to align the doors:

1. With one hand, lift up the door you want to raise at middle hinge.
2. With other hand, use pliers to insert snap ring as shown.
3. Insert additional snap rings until the doors are aligned. (Three snap rings are provided with unit.)

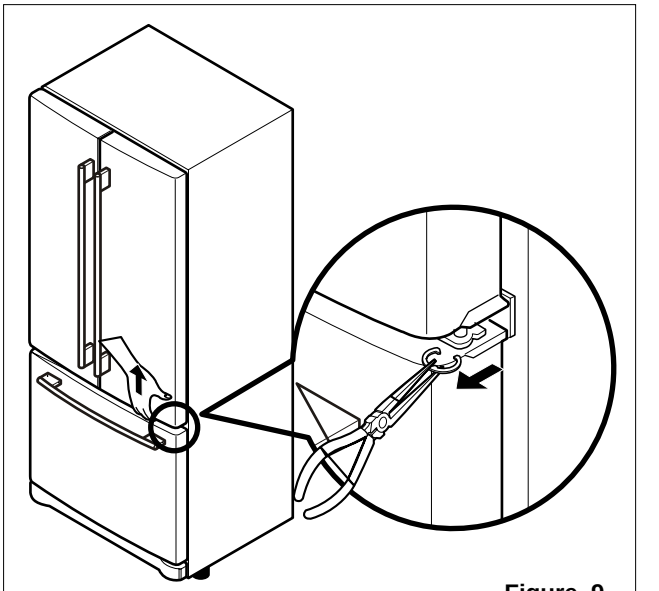


Figure 9

3-3 FAN AND FAN MOTOR

1. Remove the freezer shelf. (If your refrigerator has an icemaker, remove the icemaker first)
2. Remove the plastic guide for slides on left side by unscrewing phillips head screws.
3. Remove the grille by removing one screw and pulling the grille forward.
4. Remove the Fan Motor assembly by loosening 2 screws and disassembling the shroud.
5. Pull out the fan and separate the Fan Motor and Bracket.

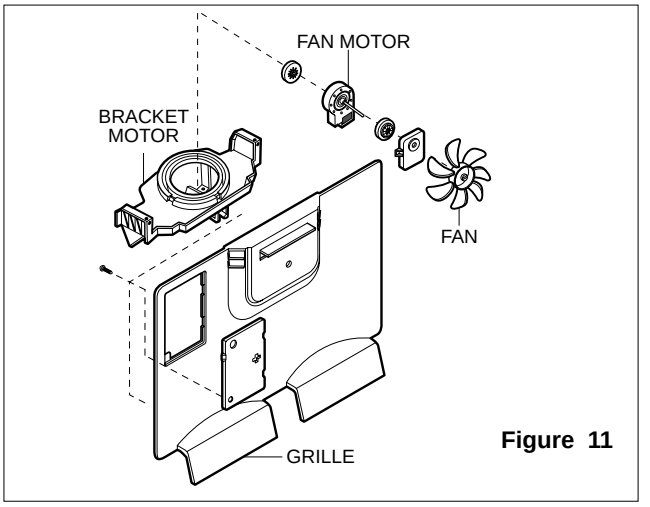


Figure 11

3-4 DEFROST CONTROL ASSEMBLY

Defrost Control assembly consists of Defrost Sensor and FUSE–M.

The Defrost Sensor works to defrost automatically. It is attached to the metal side of the Evaporator and senses its temperature. At 72°C, it turns the Defrost Heater off.

Fuse-M is a safety device for preventing over-heating of the Heater when defrosting.

1. Pull out the grille assembly. (Figure 12)
2. Separate the connector with the Defrost Control assembly and replace the Defrost Control assembly after cutting the Tie Wrap. (Figure 13)

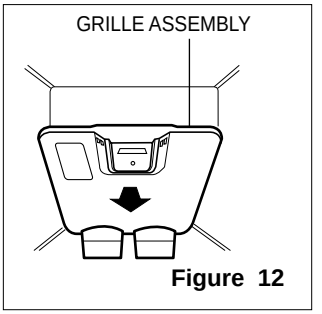


Figure 12

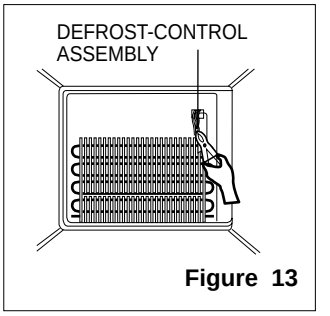


Figure 13

3-5 LAMP

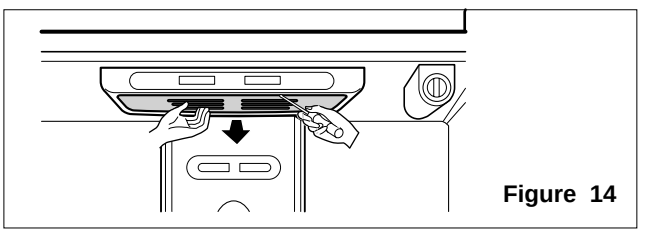


Figure 14

3-5-1 To change the refrigerator light (figure 14)

1. Unplug the power cord from the outlet.

2. Remove refrigerator shelves.

3. Release the hooks on the front of the light shield with the help of a flat screwdriver and pull the shield down to remove it.

4. Turn the bulb counterclockwise.

5. To assemble, first insert the hooks at the back and then push up the light shield upwards.

(Max. 40 W2EA).

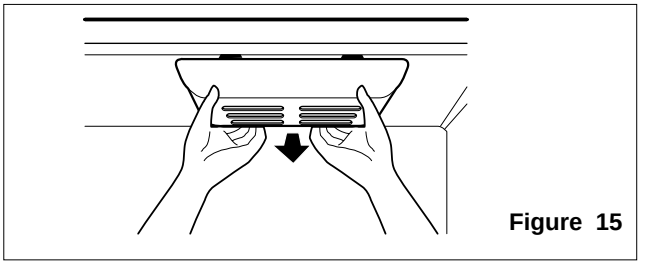


Figure 15

3-5-2 Freezer Compartment Lamp (figure 15)

1. Unplug refrigerator or disconnect power.
2. Reach behind light shield to remove bulb.
3. Replace bulb with a 40-watt appliance bulb.
4. Plug in refrigerator or reconnect power.

3-6 CONTROL BOX-REFRIGERATOR

1. First, remove all shelves in the refrigerator, than remove the Refrigerator control Box by loosening 2 screws.

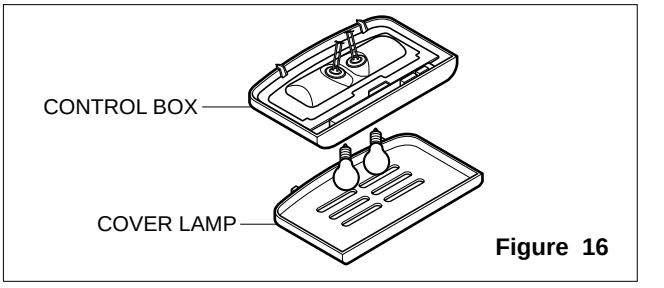


Figure 16

2. Remove the Refrigerator Control Box by pulling it downward.
3. Disconnect the lead wire on the right position and separate the lamp sockets.

3-7 MULTI DUCT

1. Remove the upper and lower Caps by using a flat screwdriver, and remove 2 screws. (Figure 17)
2. Disconnect the lead wire on the bottom position.

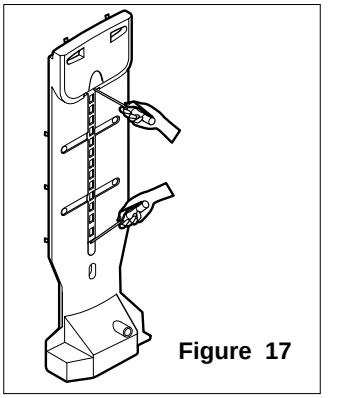


Figure 17

4. ADJUSTMENT

4-1 COMPRESSOR

4-1-1 Role

The compressor intakes low temperature and low pressure gas from the evaporator of the refrigerator and compresses this gas to high-temperature and high-pressure gas. It then delivers the gas to the condenser.

4-1-2 Composition

The compressor includes overload protection. The PTC starter and OLP (overload protector) are attached to the outside of the compressor. Since the compressor is manufactured to tolerances of 1 micron and is hermetically sealed in a dust and moisture-free environment, use extreme caution when repairing it.

4-1-3 Note for Usage

(1) Be careful not to allow over-voltage and over-current.

(2) If compressor is dropped or handled carelessly, poor operation and noise may result.

(3) Use proper electric components appropriate to the Particular Compressor in your product.

(4) Keep Compressor dry.

If the Compressor gets wet (in the rain or a damp environment) and rust forms in the pin of the Hermetic Terminal, poor operation and contact may result.

(5) When replacing the Compressor, be careful that dust, humidity, and soldering flux don ’t contaminate the inside of the compressor. Contamination in the cylinder may cause noise, improper operation or even cause it to lock up.

4-2 PTC-STARTER

4-2-1 Composition of PTC-Starter

(1) PTC (Positive Temperature Coefficient) is a no-contact semiconductor starting device which uses ceramic material consisting of $BaTiO_3$.

(2) The higher the temperature is, the higher the resistance value. These features are used as a starting device for the Motor.

4-2-2 Role of PTC-Starter

(1) The PTC is attached to the Sealed Compressor and is used for starting the Motor.

(2) The compressor is a single-phase induction motor. Durign the starting operation, the PTC allows current flow to both the start winding and main winding.

4-2-3 PTC-Applied Circuit Diagram

•Starting Method for the Motor

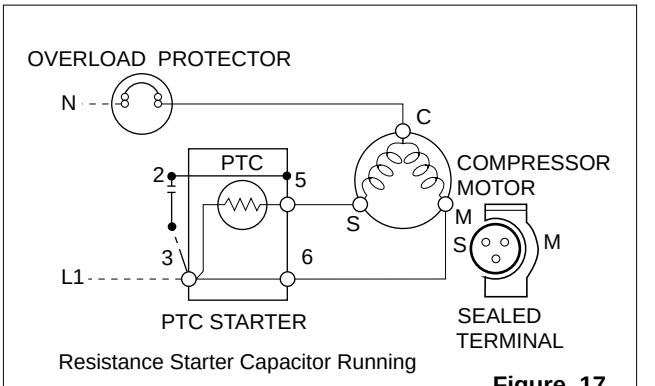


Figure 17

4-2-4 Motor Restarting and PTC Cooling

(1) It requires approximately 5 minutes for the pressure to equalize before the compressor can restart.

(2) The PTC device generates heat during operation. Therefore, it must be allowed to cool before the compressor can restart.

4-2-5 Relation of PTC-Starter and OLP

(1) If the compressor attempts to restart before the PTC device is cooled, the PTC device will allow current to flow only to the main winding.

(2) The OLP will open because of the over current condition. This same process will continue (3 to 5 times) when the compressor attempts to restart until the PTC device has cooled. The correct OLP must be properly attached to prevent damage to the compressor.
Parts may appear physically identical but could have different electrical ratings. Replace parts by part number and model number. Using an incorrect part could result in damage to the product, fire, injury, or possibly death.

4-2-6 Note for Using the PTC-Starter

(1) Be careful not to allow over-voltage and over-current.

(2) Do not drop or handle carelessly.

(3) Keep away from any liquid.
If liquid such as oil or water enters the PTC, PTC materials may fail due to breakdown of their insulating capabilities.

(4) If the exterior of the PTC is damaged, the resistance value may be altered. This can cause damage to the compressor and result in a no-start or hard-to-start condition.

(5) Always use the PTC designed for the compressor and make sure it is properly attached to the compressor. Parts may appear physically identical but could have different electrical ratings. Replace parts by part number and model number. Using an incorrect part could result in damage to the product, fire, injury, or possibly death.

4-3 OLP (OVERLOAD PROTECTOR)

4-3-1 Definition of OLP

(1) OLP (OVERLOAD PROTECTOR) is attached to the Compressor and protects the Motor by opening the circuit to the Motor if the temperature rises and activating the bimetal spring in the OLP.

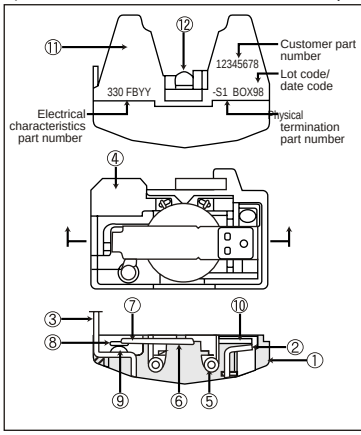
(2) When high current flows to the Compressor motor, the Bimetal works by heating the heater inside the OLP, and the OLP protects the Motor by cutting off the current flowing to the Compressor Motor.

4-3-2 Role of the OLP

(1) The OLP is attached to the Sealed Compressor used for the Refrigerator. It prevents the Motor Coil from being started in the Compressor.

(2) For normal operation of the OLP, do not turn the Adjust Screw of the OLP in any way.

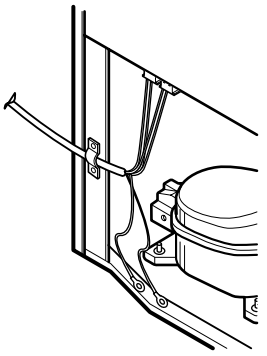
(OVERLOAD PROTECTOR cross section)



Part No.	Name
①	Base, phenolic (UL 94 V-0 rated)
②	Movable arm support, plated steel
③	Stationary contact support, plated steel
④	Heater support, plated steel
⑤	Heater, resistance alloy
⑥	Disc, thermostatic alloy
⑦	Movable arm, spring temper copper alloy
⑧	Contact, movable, silver on copper
⑨	Contact, stationary, silver on copper
⑩	Slug, plated steel
⑪	Cover, polyester (UL 94 V-0 rated)
⑫	Pin connector, plated copper alloy (To engage 2.33/2.66 mm dia. pin)

Figure 18

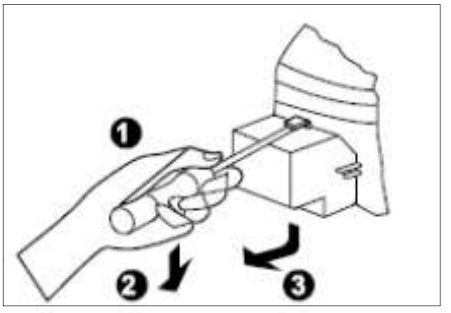
4-4 TO REMOVE THE COVER PTC



1) Remove the Cover Back M/C.

(2) Disconnect two housing upper side of comp connected in.

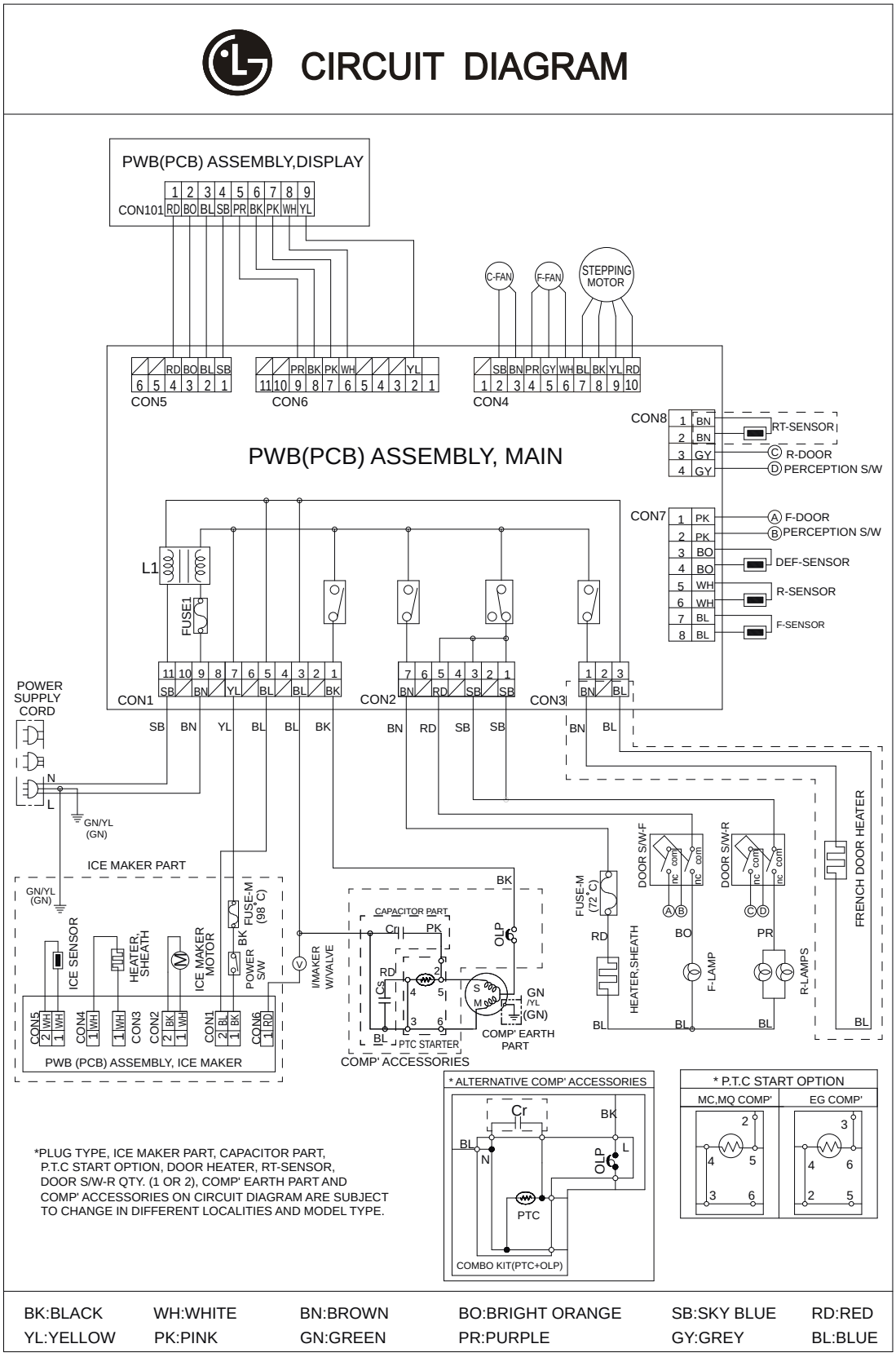
(3) Loosen two screws on comp base.



(4) Use a L-shaped flap tool to pry off the cover.

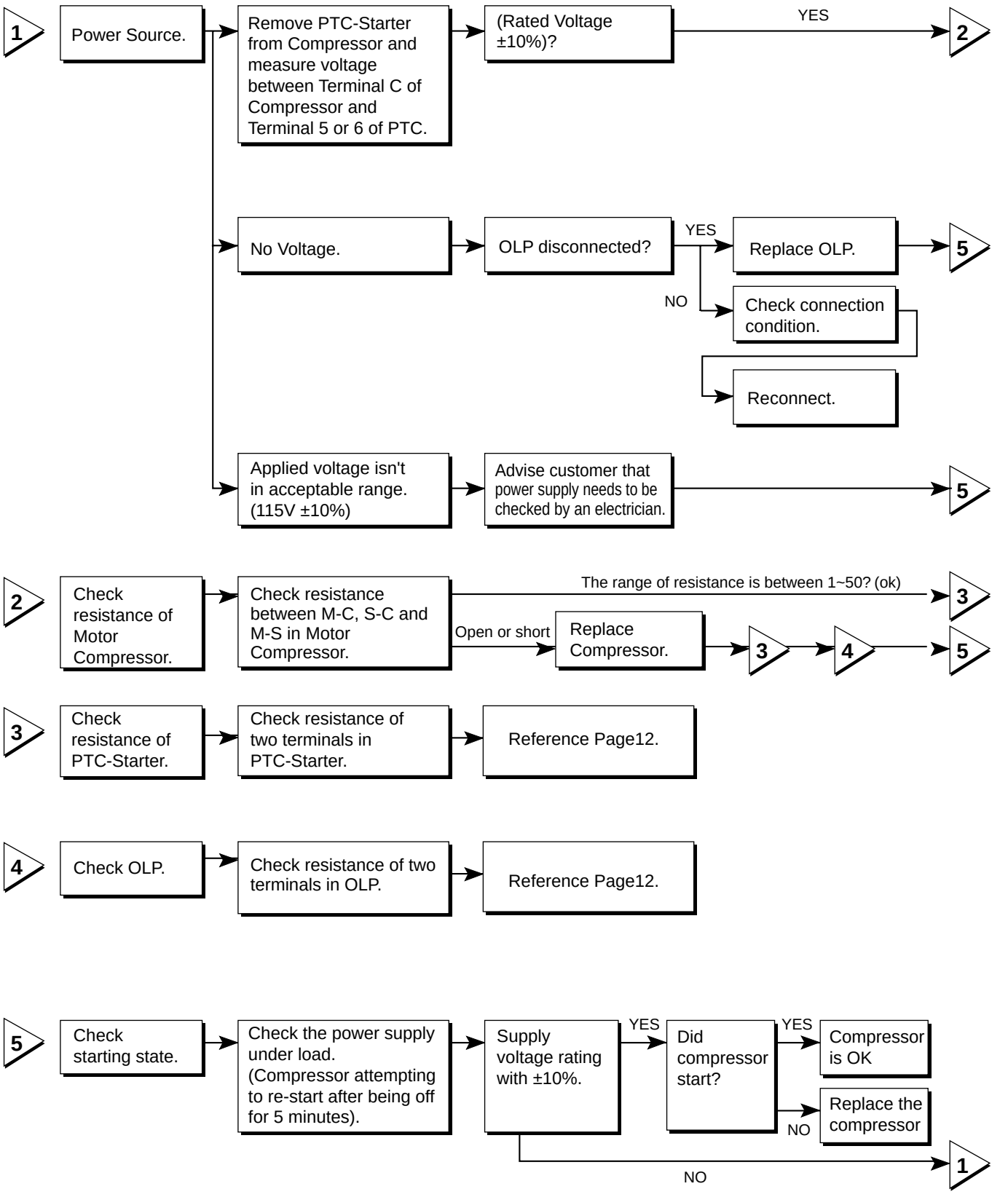
(5) Assembly in reverse order of disassembly.

5. CIRCUIT DIAGRAM



6. TROUBLESHOOTING

6-1 COMPRESSOR AND ELECTRIC COMPONENTS



6-2 PTC AND OLP

Normal operation of Compressor is impossible or poor.

Separate PTC-Starter from Compressor and measure resistance between No. 5 and 6 of PTC-Starter with a Tester. (Figure 19)

Observation value is 115V/60Hz : 6.8? ±30%

The resistance value is 0? (short) or ∞(open).

Replace PTC-Starter.

Separate OLP from Compressor and check resistance value between two terminals of OLP with a Tester. (Figure 20)

Shows continuity

Check another electric component.

Open

Replace OLP.

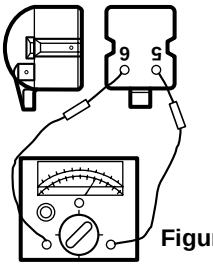


Figure 19

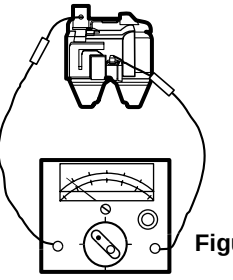
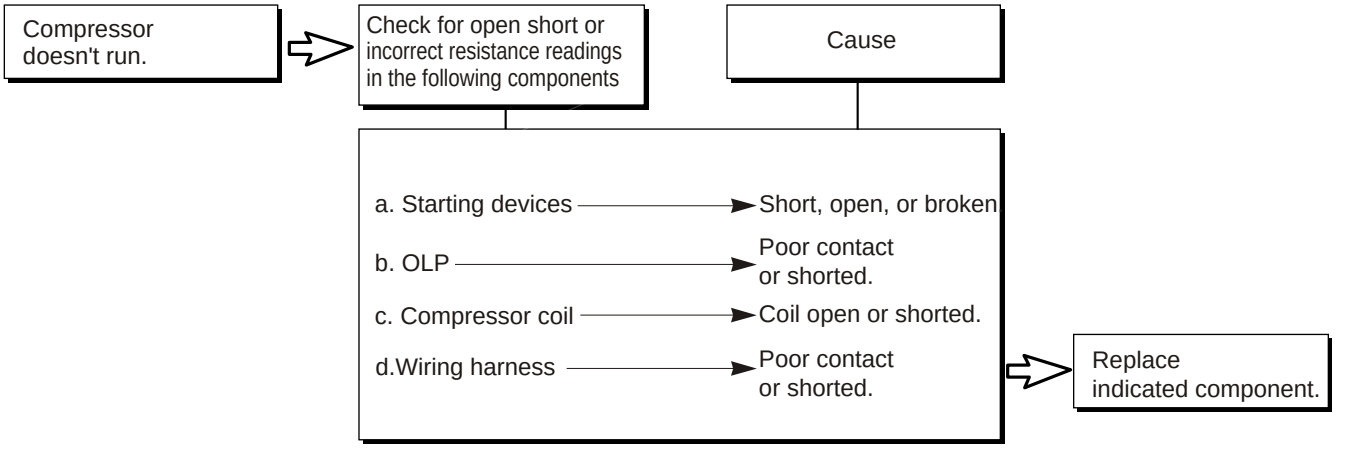


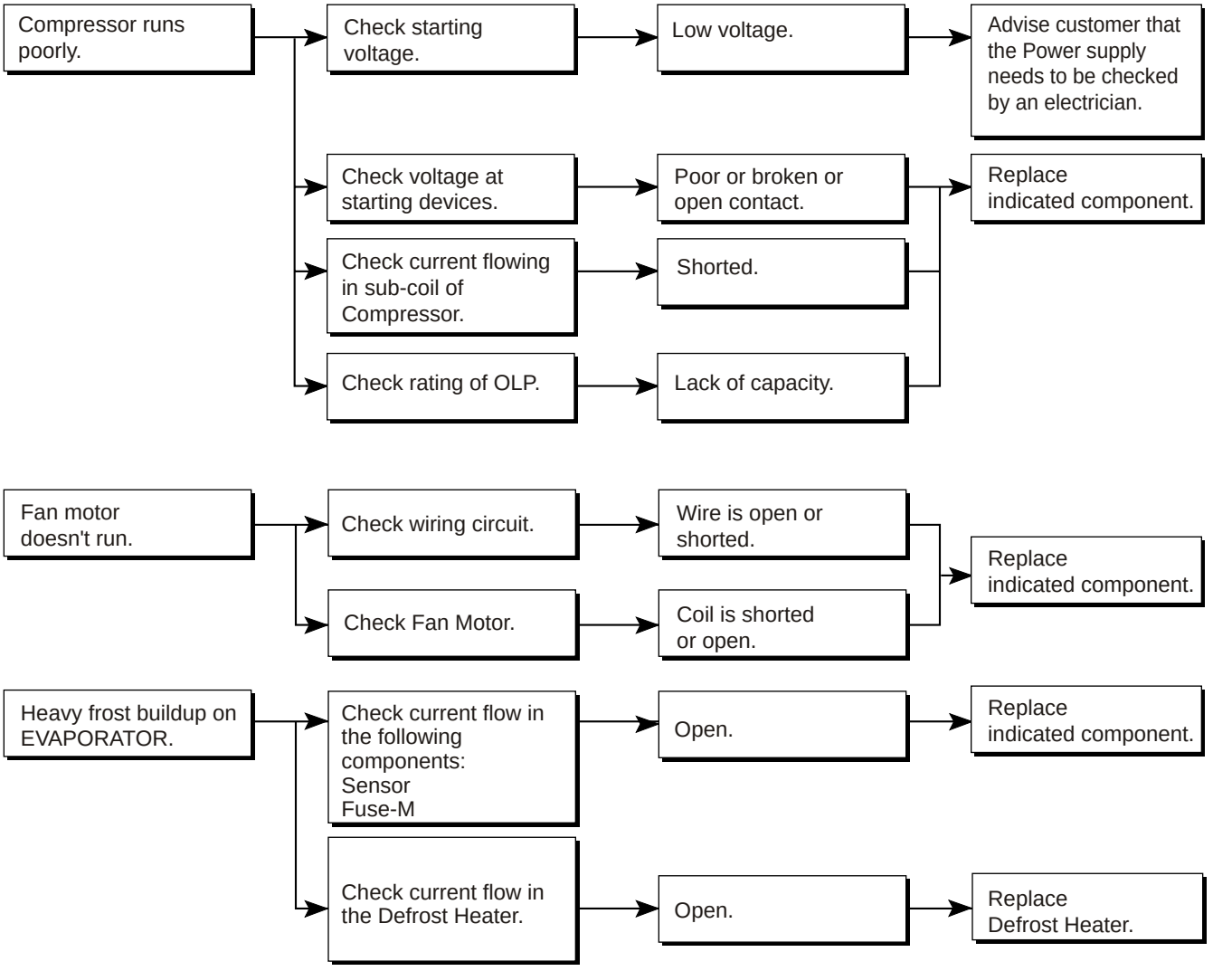
Figure 20

6-3 OTHER ELECTRICAL COMPONENTS

- **Not cooling at all**



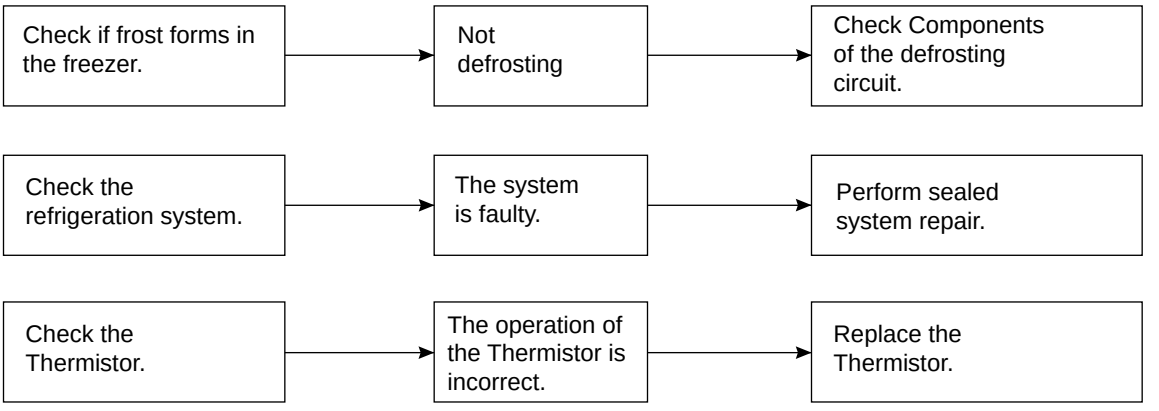
- **Poor cooling performance**



6-4 SERVICE DIAGNOSIS CHART

COMPLAINT	POINTS TO BE CHECKED	REMEDY
No Cooling.	• Is the power cord unplugged from the outlet? • Check if the power switch is set to OFF. • Check if the fuse of the power switch is shorted. • Measure the voltage of the power outlet.	• Plug into the outlet. • Set the switch to ON. • Replace the fuse. • If the voltage is low, correct the wiring.
Cools poorly.	• Check if the unit is placed too close to the wall. • Check if the unit is placed too close to the stove, gas cooker, or in direct sunlight. • Is the ambient temperature too high or the room door closed? • Check if food put in the refrigerator is hot. • Did you open the door of the unit too often or check if the door is sealed properly? • Check if the Control is set to **Warm position**.	• Place the unit about 4 inches (10 cm) from the wall. • Place the unit away from these heat sources. • Lower the ambient temperature. • Put in foods after they have cooled down. • Don't open the door too often and close it firmly. • Set the control to **Recommended position**.
Food in the Refrigerator is frozen.	• Is food placed in the cooling air outlet? • Check if the control is set to **colder position**. • Is the ambient temperature below 5ºC?	• Place foods in the high-temperature section. (front part) • Set the control to **Recommended position**. • Set the control to **Warm position**.
Condensation or ice forms inside the unit.	• Is liquid food sealed? • Check if food put in the refrigerator is hot. • Did you open the door of the unit too often or check if the door is sealed properly?	• Seal liquid foods with wrap. • Put in foods after they have cooled down. • Don't open the door too often and close it firmly.
Condensation forms in the Exterior Case.	• Check if the ambient temperature and humidity of the surrounding air are high. • Is there a gap in the door gasket?	• Wipe moisture with a dry cloth. It will disappear in low temperature and humidity. • Fill up the gap.
There is abnormal noise.	• Is the unit positioned in a firm and even place? • Are any unnecessary objects placed in the back side of the unit? • Check if the Drip Tray is not firmly fixed. • Check if the cover of the compressor enclosure in the lower front side is taken out.	• Adjust the Leveling Screw, and position the refrigerator in a firm place. • Remove the objects. • Fix the Drip Tray firmly in the original position. • Place the cover in its original position.
Door does not close well.	• Check if the door gasket is dirty with an item like juice. • Is the refrigerator level? • Is there too much food in the refrigerator?	• Clean the door gasket. • Position in a firm place and level the Leveling Screw. • Make sure food stored in shelves does not prevent the door from closing.
Ice and foods smell unpleasant.	• Check if the inside of the unit is dirty. • Are foods with a strong odor unwrapped? • The unit smells of plastic.	• Clean the inside of the unit. • Wrap foods that have a strong odor. • New products smell of plastic, but this will go away after 1-2 weeks.

•Other possible problems:

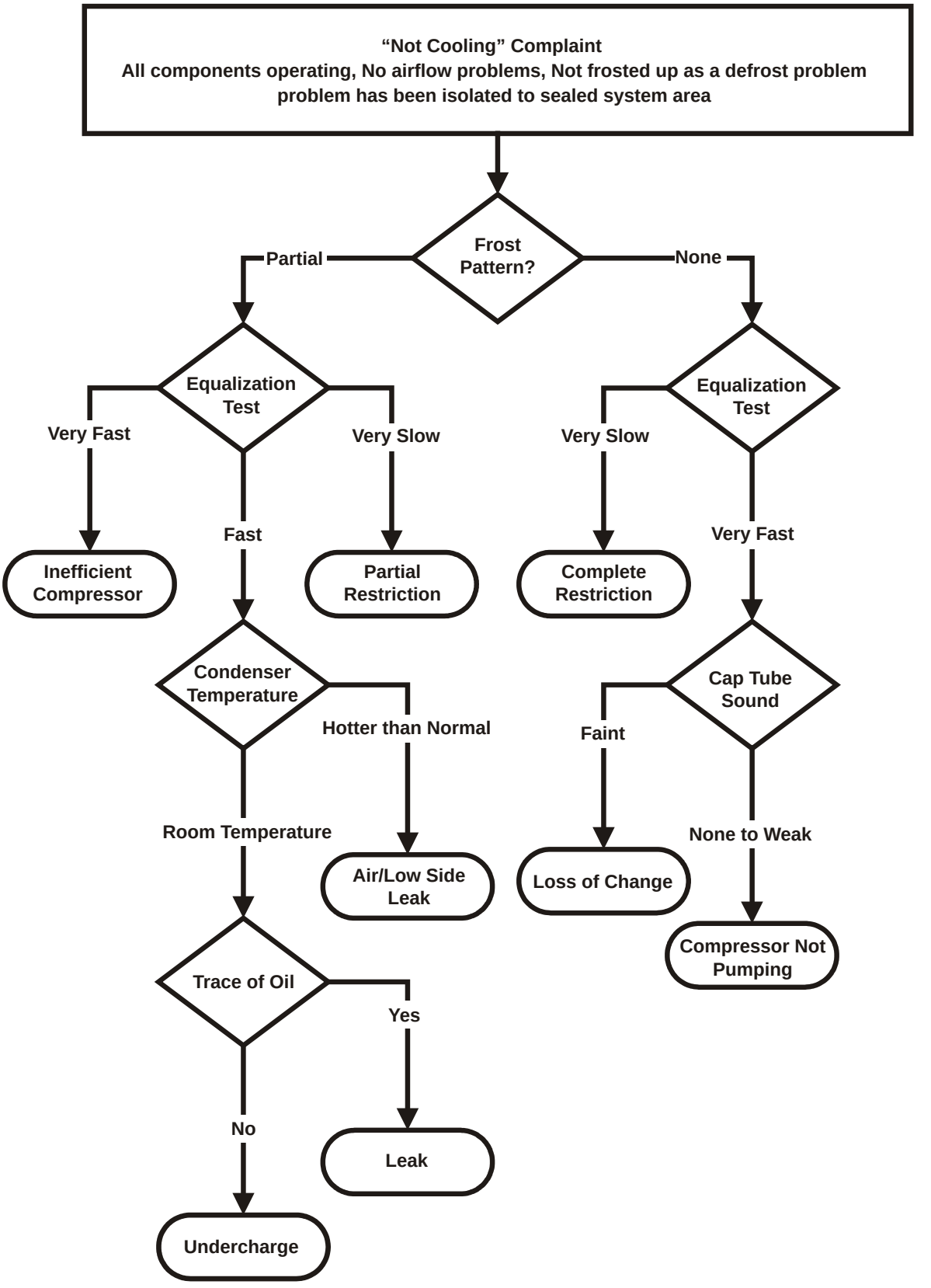


6-5 REFRIGERATION CYCLE

- **Troubleshooting Chart**

CAUSE		STATE OF THE UNIT	STATE OF THE EVAPORATOR	TEMPERATURE OF THE COMPRESSOR	REMARKS
LEAKAGE	PARTIAL LEAKAGE	Freezer compartment and Refrigerator don't cool normally.	Low flowing sound of Refrigerant is heard and frost forms in inlet only.	A little higher than ambient temperature.	• Refrigerant level is low due to a leak. • Normal cooling is possible by restoring the normal amount of refrigerant and repairing the leak.
	COMPLETE LEAKAGE	Freezer compartment and Refrigerator don't cool normally.	Flowing sound of refrigerant is not heard and frost isn't formed.	Equal to ambient temperature.	• No discharging of Refrigerant. • Normal cooling is possible by restoring the normal amount of refrigerant and repairing the leak.
CLOGGEDBYDUST	PARTIAL CLOG	Freezer compartment and Refrigerator don't cool normally.	Flowing sound of refrigerant is heard and frost forms in inlet only.	A little higher than ambient temperature.	• Normal discharging of the refrigerant. • The capillary tube is faulty.
	WHOLE CLOG	Freezer compartment and Refrigerator don't cool.	Flowing sound of refrigerant is not heard and frost isn't formed.	Equal to ambient temperature.	• Normal discharging of the Refrigerant.
MOISTURE CLOG		Cooling operation stops periodically.	Flowing sound of refrigerant is not heard and frost melts.	Lower than ambient temperature.	• Cooling operation restarts when heating the inlet of the capillary tube.
DEFECTIVE COMPRESSION	COMP-RESSION	Freezer and Refrigerator don't cool.	Low flowing sound of refrigerant is heard and frost forms in inlet only.	A little higher than ambient temperature.	• Low pressure at high side of compressor due to low refrigerant level.
	NO COMP-RESSION	No compressing operation.	Flowing sound of refrigerant is not heard and there is no frost.	Equal to ambient temperature.	• No pressure in the high pressure part of the compressor.

6-5-1 SEALED SYSTEM DIAGNOSIS

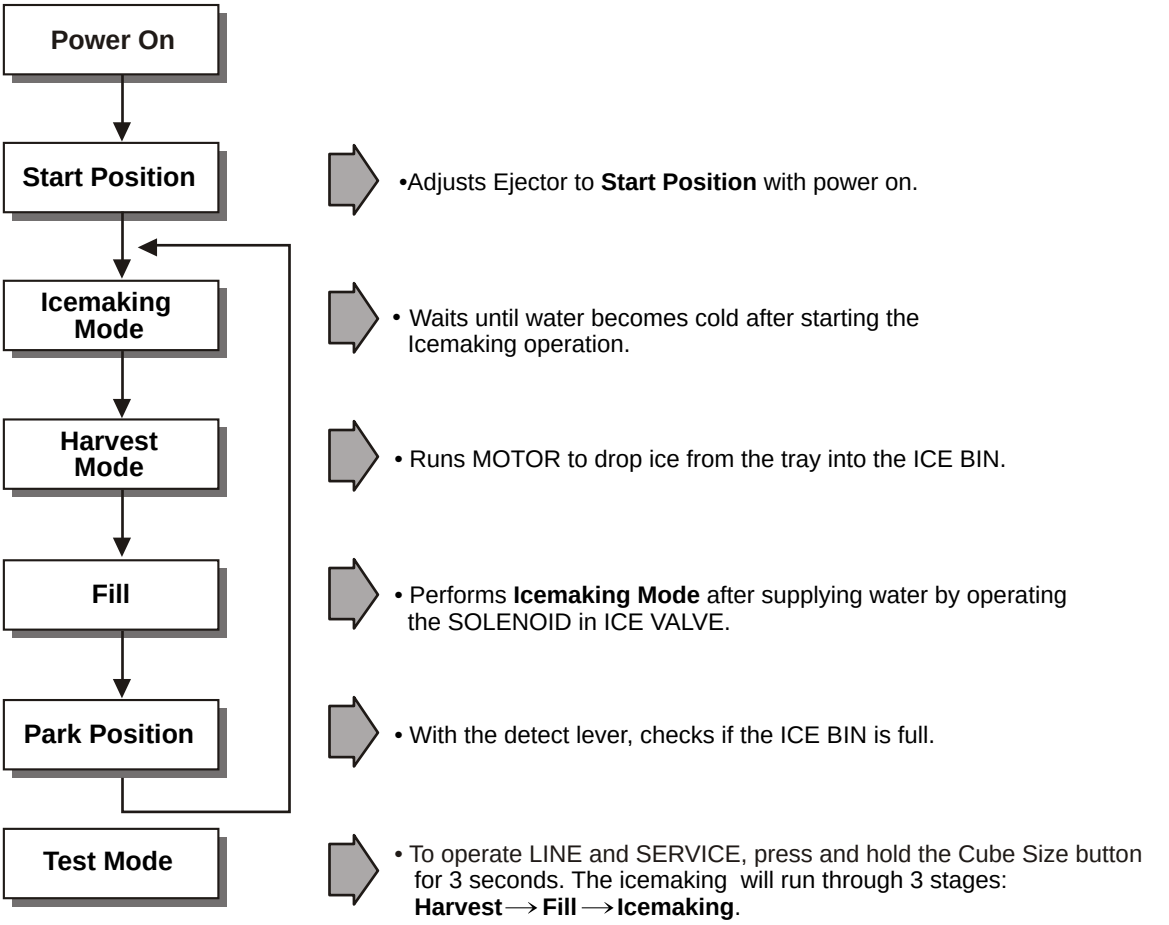


(The equalization test is trying to restart a compressor using a start kit after it has been operating.)

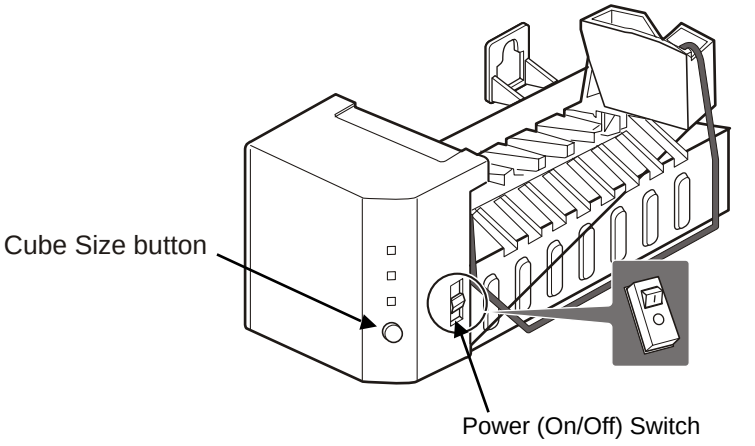
7. OPERATION PRINCIPLE AND REPAIR METHOD OF ICEMAKER

7-1 OPERATION PRINCIPLE

7-1-1 Operation Principle of Icemaker



1. Turning the Icemaker stop switch off (O) stops the icemaking function.
2. Setting the Icemaker switch to OFF and then turning it back on will reset the icemaker control.



7-2 ICE MAKER FUNCTIONS

7-2-1 Ice Making Mode

1. Icemaking refers to the freezing of supplied water in the ice trays. Complete freezing is assured by measuring the temperature of the Tray with icemaking SENSOR.
2. Icemaking starts after completion of the water fill operation.
3. The icemaking function is completed when the sensor reaches -7°C, 60 to 240 minutes after starting.

NOTE : After icemaker power is ON, the icemaker heater will be on for test for 9 sec.

7-2-2 Harvest Mode

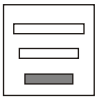
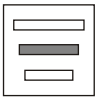
1. Harvest (Ice removing) refers to the operation of dropping ices into the ice bin from the tray when icemaking has completed.
2. Harvest mode:
   (1) The Heater is ON for 30 seconds, then the motor starts.
   (2) Harvest mode is completed if it reaches start position again while Heater & Motor are on at the same time.
      A. ice bin is full : The EJECTOR stops (heater off).
      B. ice bin is not full : The EJECTOR rotates twice to open for ice.

NOTE : If the EJECTOR does not rotate once within 5 minutes in status (2), separate heater control mode starts operating to prevent the EJECTOR from being constrained. (It is recommended that the user open for ice to return to normal mode.)

7-2-3 Fill/Park Position

1. Once a normal harvest mode has been completed, the water solenoid will be activated.
2. The amount of water is adjusted by pressing the fill key repeatedly. This changes the time allowed for fill as illustrated in the table below.

Water supply amount table

STAGE	TIME TO SUPPLY	INDICATIONS	REMARKS
1	6 sec.		The water amount will vary depending on the water control switch setting, as well as the water pressure of the connected water line.
2	7 sec.		
3	8 sec.		

7-2-5 Function TEST

1. This is a compulsory operation for test, service, cleaning, etc. It is operated by pressing and holding the Cube Size button for 3 seconds.
2. The test works only in the Icemaking Mode. It cannot be entered from the Harvest or Fill mode. (If there is an ERROR, it can only be checked in the TEST mode.)
3. **Caution!** If the test is performed before water in the icemaker is frozen, the ejector will pass through the water. When the fill mode begins (Stage 4), unless the water supply has been shut off, added water will overflow into the ice bin. If the control Doesn't operate normally in the TEST mode, check and repair as needed.
4. After water is supplied, the normal CYCLE is followed: **icemaking ⇨ Harvest ⇨ Fill ⇨ Park Position**.
5. Five seconds after Stage 5 is completed, the icemaker returns to MICOM control. The time needed to supply water resets to the pre- test setting.

Diagnosis TABLE

STAGE	ITEMS	INDICATOR *	REMARKS
1	HEATER		Five seconds after heater starts, heater will go off if temperature recorded by sensor is 10°C (50°F)or lever is in up position.
2	MOTOR		Five seconds after heater starts, you can confirm that motor is moving.
3	HALL IC (TRAY)		You can confirm Hall IC detection of position.
4	SOLENOID VALVE		Two seconds after detection of initial position, you can confirm that valve is on.
5	HALL IC (LEVER)		You can check when the Hall IC is sensing a full ice condition. (If there is a water fill error, the fifth LED is not on.)
6	Reset	Return to Status prior to TEST MODE	Five seconds after fifth stage is completed, the icemaker resets to initial status.

7-3 DEFECT DIAGNOSIS FUNCTION

7-3-1 ERROR CODES shown on Ice Maker water supply control panel

NO	DIVISION	INDICATOR	PROBLEM	REMARKS
1	Normal	Note fill times (see previous page)	None	Display switch operates properly
2	Icemaking Sensor malfunction		Open or shorted wire or sensor	Make sure that the wire on each sensor is connected.
3	Icemaker Kit malfunction		Ejector blades have not reached the park position after 18 minutes from start of harvest mode	Check HALL IC/MOTOR/ HEATER/RELAY

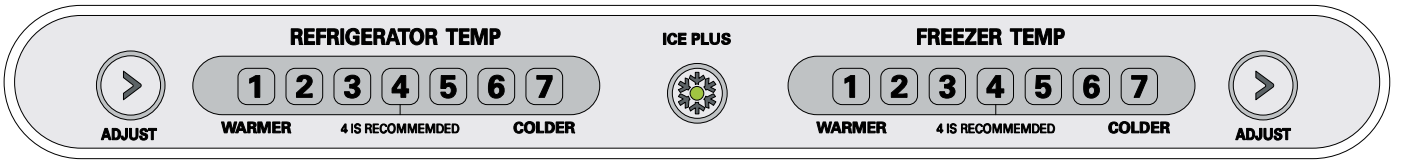
*ERROR indicators in table can be checked only in TEST mode.

8. DESCRIPTION OF FUNCTION & CIRCUIT OF MICOM

8-1 FUNCTION

8-1-1 Function

1. When the appliance is plugged in, it is set to "4" for Refrigerator and "4" for freezer.
   You can adjust the Refrigerator and the Freezer control temperature by pressing the ADJUST button.
2. When the power is initially applied or restored after a power failure, it is automatically set to "4" & "4".



8-1-2 Control of freezer fan motor

1. Freezer fan motor has high and standard RPMs.
2. High RPM is used when electricity is first on, for ICE PLUS, and when refrigerator os overloaded. But standard RPMS is used for general purposes.
3. To improve cooling speed and load corresponding speed, the RPM of freezer fan motor shall change from normal speed to high speed.
4. High speed (2600RPM): initial power on or load corresponding operation, ICE PLUS.
   Normal speed (2300RPM): general working conditions.
5. Fan motor stops when refrigerator door opens.
6. Fan motor stops when freezer door opens. (Only if COMP is OFF).

8-1-3 ICE PLUS

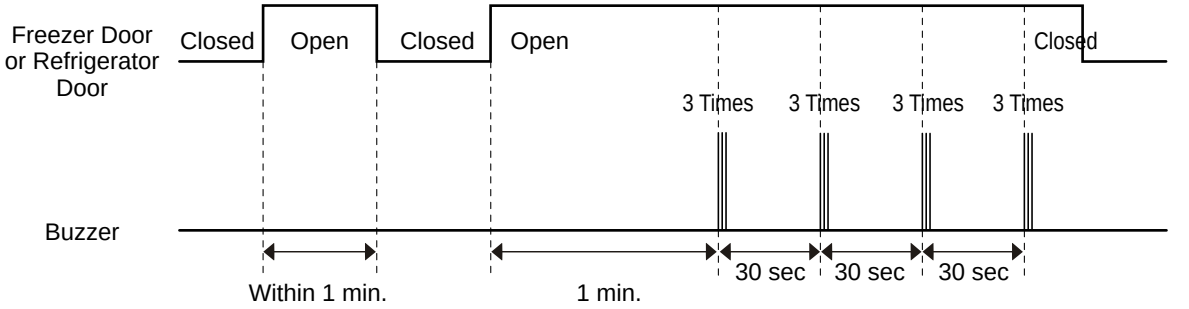
1. The purpose of this function is to intensify the cooling speed of freezer and to increase the amount of ice.
2. Whenever selection switch is pressed, selection/release, the LED will turn ON or OFF.
3. If there is a power cut and the refrigerator is power on again, ICE PLUS function will be canceled.
4. To activate these function you need to press the ICE PLUS key and the LED will turn ON. This function will remain activated for 24 hrs. The first three hours the compressor and ICE PLUS will be ON. The next 21hours the freezer will be controlled at the lowest temperature. After 24 hours or if the ICE PLUS key is pressed again, the freezer will return to its previous temperature.
5. For the first three hours notice the following cases:
   (1) Compressor and freezer fan(HIGH RPM) continuously operate for three hours.
   (2) If defrost starts during ICE PLUS, ICE PLUS operates for the rest of time after defrost is completed, when ICE PLUS operation time is less than 90 minutes.
   If ICE PLUS operates for more than 90minutes, the ICE PLUS will operate for two hours after defrost is completed.
   (3) If ICE PLUS is pressed during defrost, ICE PLUS LED is on but this function will start seven minutes after defrost is completed and it shall operate for three hours.
   (4) If ICE PLUS is selected within seven minutes after compressor has stopped, the compressor (compressor delays seven minutes) shall start after the balance of the delay time.
   (5) The fan motor in the freezer compartment rotates at high speed during ICE PLUS.
6. For the rest of 21 hours, the freezer will be controlled at the lowest temperature.

8-1-4. REFRIGERATOR LAMP AUTO OFF

1. To protect the risk of lamp heat, when Refrigerator door opens for 7 min., refrigerator lamp is auto off.

8-1-5 Alarm for Open Door

1. This feature sounds a buzzer when the freezer or refrigerator door is not closed within 1 minute after it is opened.
2. One minute after the door is opened, the buzzer sounds three times each for 1/2 seconds. These tones repeat every 30 seconds.
3. The alarm is cancelled when the freezer or the refrigerator is closed while the buzzer sounds.



8-1-6 Buzzer Sound

When the button on the front Display is pushed, a Ding~ Dong~ sound is produced.
(Refer to the Buzzer Circuit 8-2-4 No. 3)

8-1-7 Defrosting (removing frost)

1. Defrosting starts each time the accumulated COMPRESSOR running time is between 7:30 and 40 hours. This time is determinated by how often and how long the doors are opened.
2. For initial power on or for restoring power, defrosting starts when the compressor running time reaches 4 hours.
3. Defriosting stops if the sensor temperature reaches 46.4°F(8°C) or more. If the sensor doesn't reach 46.4°F(8°C) in a hour, the defrost mode is malfunctioning.
4. Defrosting won't function if its sensor is defective (wires are cut or short circuited).

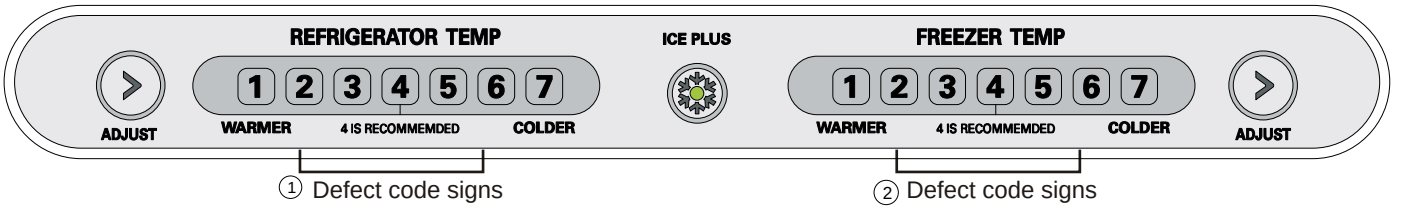
8-1-8 Electrical Parts Are Turned On Sequentially

Electrical parts such as COMP, defrosting heater, freezer FAN, etc. are turned on in the following order to prevent noise and parts damage. Several parts are started at the same time at initial power on and are turned off together when TEST is completed.

OPERATING		ORDERS
Initial power on	Temperature of Defrosting Sensor is 45°C or more (when unit is newly purchased or when moved)	**POWER ON** → (In ½ second) **COMP ON** → (In ½ second) **Freezer FAN ON** → (In ½ second) **Cooling FAN ON** → (In ½ second) **Door Heater ON**
	Temperature of defrosting sensor is lower than 45°C (when power cuts, SERVICE)	**POWER ON** → (In ½ second) **Defrosting heater ON** → (In 5 second) **Defrosting heater OFF** → (In ½ second) **Door Heater ON** (In ½ second) **COMP ON** → (In ½ second) **Freezer FAN ON** → (In ½ second) **Cooling FAN ON**
Reset to normal operation from TEST MODE		**Total load OFF** → (In 7 minutes) **COMP ON** → (In ½ second) **Cooling FAN ON** → (In ½ second) **Door heater ON** → (In 10 minutes) **Freezer Fan ON**

8-1-9 Defect Diagnosis Function

1. Automatic diagnosis makes servicing the refrigerator easy.
2. When a defect occurs, the buttons will not operate; but the tones. such as ding. will sound.
3.When defect is repaired the defect code is removed and refrigerator returns to normal operation (RESET)
4. The defect CODE is shown on the Display.



ERROR CODE on display panel ● LED OFF LED ON ◎

NO	ITEM	ERROR CODE		CONTENTS	REMARKS
1	Failure of freezer sensor	All off	● ◎ ◎ ◎ ◎ ◎ ◎	Cut or short circuit wire	Inspect Connecting wires on each sensor
2	Failure of Refrigerator sensor	All off	◎ ● ◎ ◎ ◎ ◎ ◎	Cut or short circuit wire	
3	Failure of defrost sensor	All off	◎ ◎ ● ◎ ◎ ◎ ◎	Cut or short circuit wire	
5	RT-sensor error (LED check mode)	All off	◎ ◎ ◎ ● ◎ ◎ ◎ Visible in LED CHECK MODE	Open or short circuit	
4	Poor of defrost	All off	● ● ● ● ◎ ◎ ◎	1 hours later after starting defrost, If sensor doesn't be over 46ºF (8ºC)	Snapping of defrost heater or Temperature fuse, pull-out of Connector (indicated minimum 1 Hours after failure occurs)
5	Failure of BLDC fan motor at freezing compartment	All off	● ● ● ● ● ◎ ◎	If there is no fan motor signal for more than 115sec in operation.	Poor motor, hocking to wires of fan, contact of structures to fan, snapping or short of lead

DISPLAY CHECK MODE: Press at the same time ADJUST REFRIGERATOR TEMP & ADJUST FREZEER TEMP For more than 1 second. This Mode is for LED inspection and ALL LED will turn ON at this time, If releasing the buttons, the display will indicate the previous Status If there is an RT sensor defect it will be indicated in this mode.

8-1-10 TEST Mode

1. The Test mode allows checking the PCB and the function of the product as well as finding out the defective part in case of an error.
2. The test mode is operated by pressing two buttons at Display panel.
3. While in the test mode, the function control button is not recognized, but the recognition tone (beep~) sounds.
4. After exiting the test mode, be sure to reset by unplugging and then plugging in the appliance.
5. If an error, such as a sensor failure, is detected while in the test mode, the test mode is cleared and the error code is displayed.
6. While an error code is displayed, the test mode will not be activated.

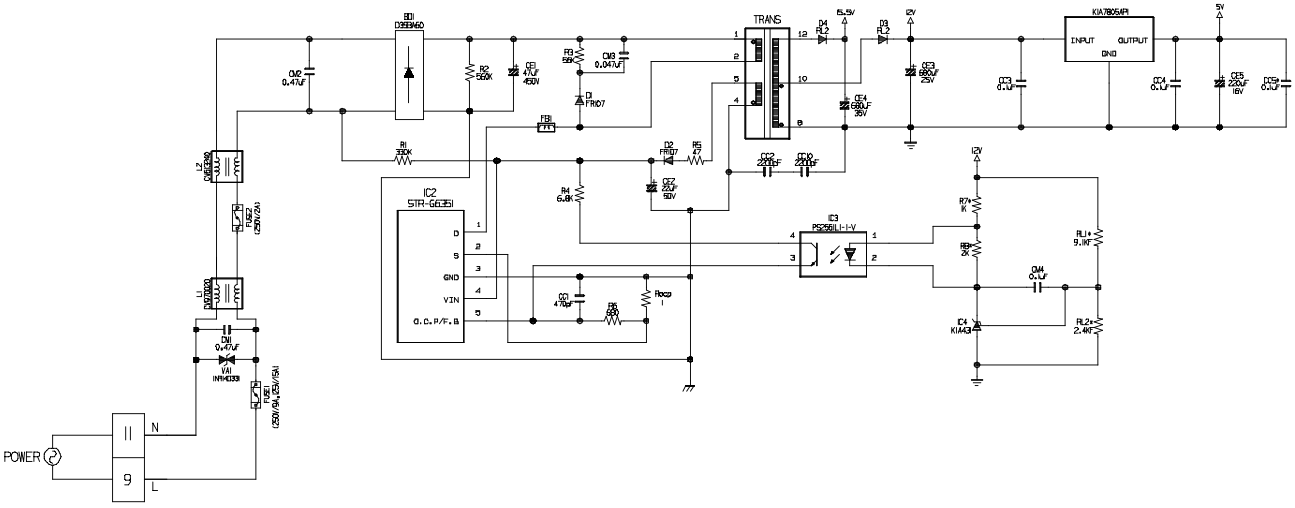
MODE	MANIPULATION	CONTENTS	REMARKS
TEST1	Push ICEPLUS key and ADJUST key of Freezer temperature at the same time over 3 seconds. Or press TEST S/W one time in the Main PCB board.	1.-Continuous operation of the COMPRESSOR 2.Continuous operation of the freezer fan 3.Stepping DAMPER OPEN 4.Defrosting Heater OFF 5.Every DISPLAY LED ON	Reset after 5 minutes
TEST2	Push ICEPLUS key and ADJUST key of Freezer temperature at the same time over 3 seconds being in TEST MODE1. Or press TEST S/W one time being in TEST MODE 1.	1.COMP OFF 2.Freezer FAN OFF 3.Stepping DAMPER CLOSE 4.Defrosting Heater ON 5.DISPLAY LED 1,3,5,7 ON	Reset if the temperature of the defrosting sensor is 46°F (8°C) or more
Reset	Push ICEPLUS key and ADJUST key of Freezer temperature at the same time over 3 seconds being in TEST MODE2. Or press TEST S/W one time being in TEST MODE 2.	Reset to the previously setting before TEST MODE	The Compressor will start after a 7-minute Delay

* Freezer Fan RPM Variable Check:
  In case the freezer fan is in operation when the ADJUST key in Refrigerator and Freezer Temp. Control are pressed for more than one second at the same time freezer fan RPM changes. (for example if high speed, to normal speed or if normal speed, to high speed for 30 seconds)
  After 30 seconds, it turns to its original RPM.

* Demonstration MODE:
  1. When the ICE PLUS key and ADJUST key of refrigerator temperature control are pressed for more than 3 seconds at the same time temperature's it converts to demostration mode.
  2. In this status, each LED is rotated with 1 second interval.
  3. In this status, all Loads are off (Compressor / Fan / Damper / Heater)
     (Even is Demonstration Mode, the refrigerator Lamp automatic off function works normally and can be demostrated)
  4. It reset if you do again as clause.

8-2 PCB FUNCTION

8-2-1 Power Circuit



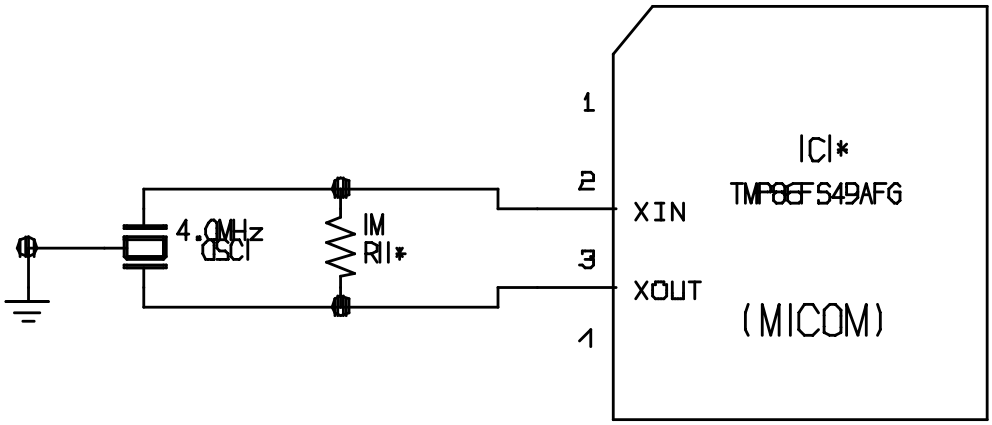
The secondary part of the TRANSFORMER is composed of the power supply for the display, the BLDC FAN Motor drive (15.5 V), the relay drive (12 Vdc) and the MICOM and IC (5 Vdc).

The voltage for each part is as follows:

PART	VA 1	CE 3	CE 4	CE 5
VOLTAGE	115 Vac	12 Vdc	15.5 Vdc	5 V

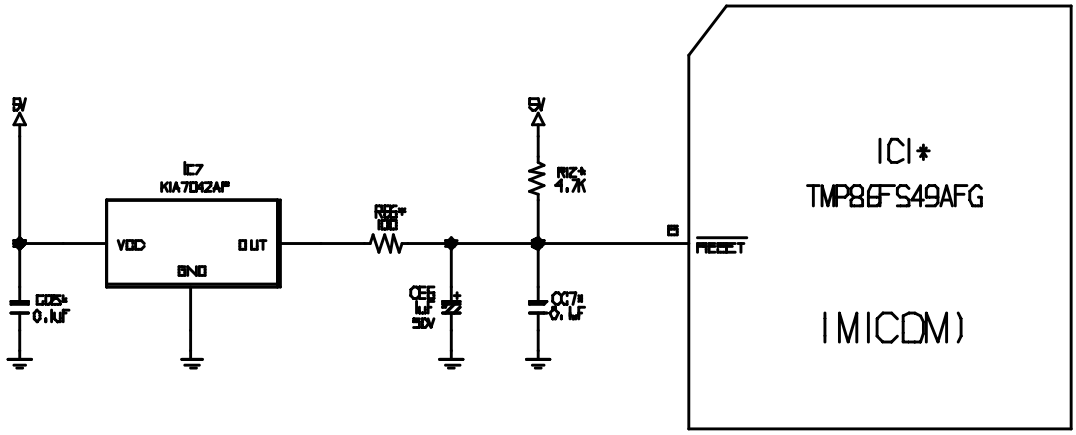
VA1 is a part for preventing over voltage and noise. When high voltage is applied, the inside elements are short-circuited and broken, resulting in blowout of the fuse in order to protect the elements of the secondary part of the TRANSFORMER.

8-2-2 Oscillation Circuit



This circuit generates the base clock for calculating time and the synchro clock for transmitting data from and to the inside logic elements of the IC1 (MICOM). Be sure to use specified replacement parts, since calculating time by the IC1 may be changed. If changed, the OSC1 SPEC will not work.

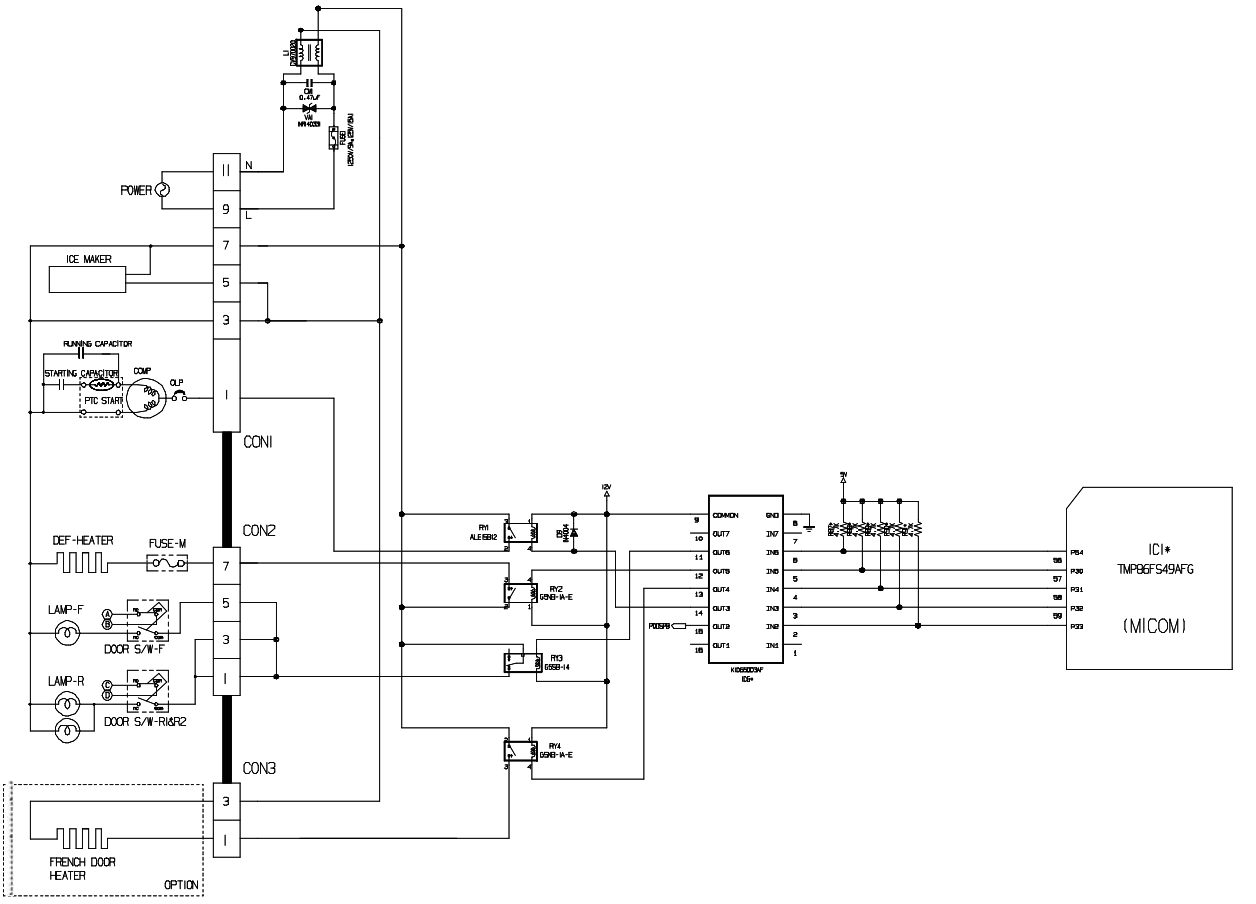
8-2-3 Reset Circuit



The RESET circuit allows all the functions to start at the initial conditions by initializing various parts, including the RAM inside the MICOM (IC1) when the power is initially supplied or the power supply to the MICOM is restored after a momentary power failure. For the initial 10ms of power supply, LOW voltage is applied to the MICOM RESET terminal. During a normal operation, 5V is applied to the RESET terminal. (If a malfunction occurs in the RESET IC, the MICOM will not operate.)

8-2-4 Load / Buzzer Drive & Open Door Detection Circuit

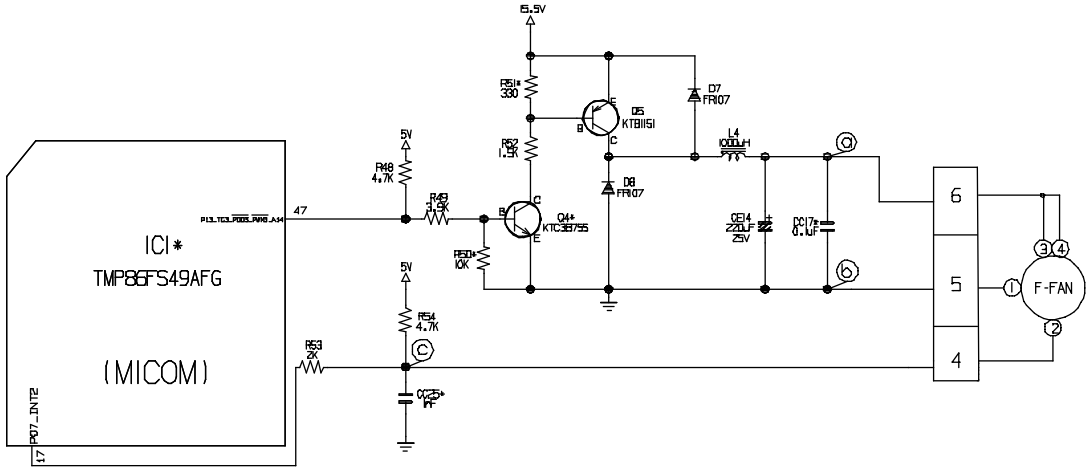
1. Load Drive Condition Check



LOAD TYPE		COMP	DEFROSTING HEATER	LAMP	FRENCH DOOR HEATER 1, 2 / DEW HEATER
Measurement Location (IC6)		NO.14	NO.12	NO.11	NO.13
Condition	ON	1V or below			
	OFF	12V			

2. Motors driving circuit (freezing compartment fan)

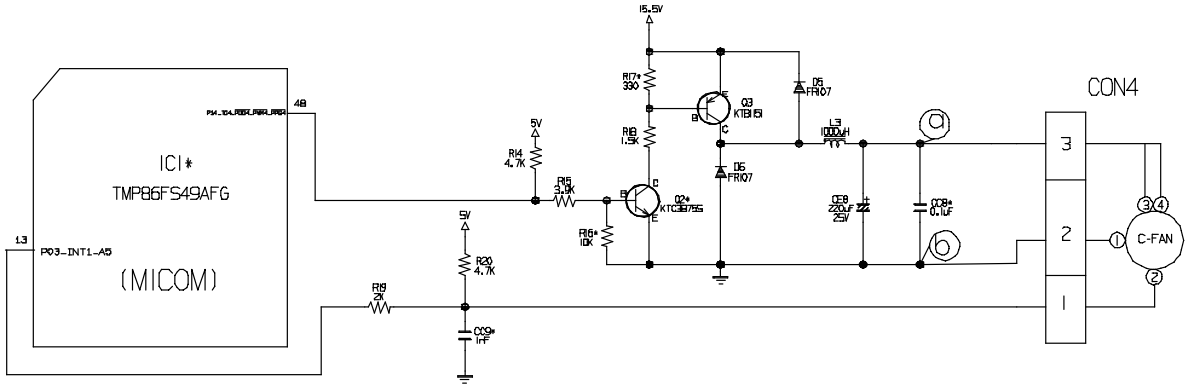
1. The circuit makes the Motor Fan OFF by cutting Off the power supplied to driver inside the Fan Motor when the is necessary.
2. This is a circuit to perform a temporary change of speed for the fan motor and applies DC voltage up to 7.5V ~ 16V to motor .
3. This circuit prevents over-driving the fan motor by cutting off power applied to the fan motor in the lock of fan motor by sensing the operation RPM of the fan motor.



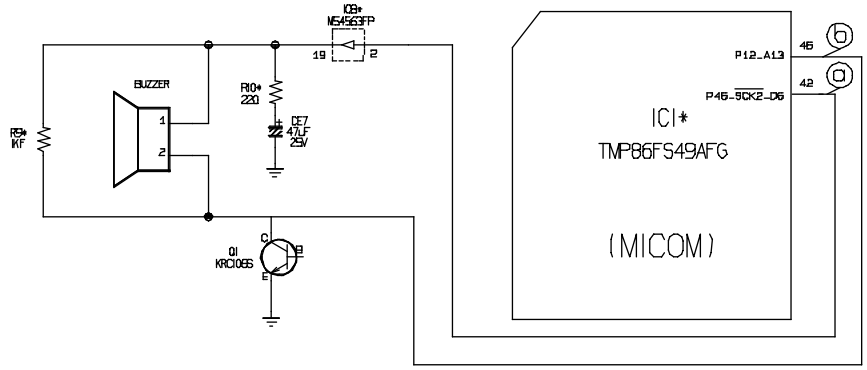
3. Cooling motor driving circuit (machine room)

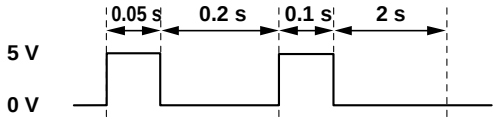
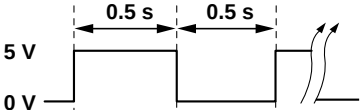
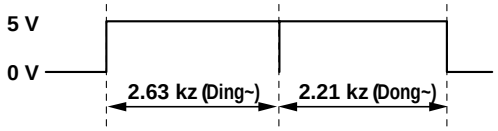
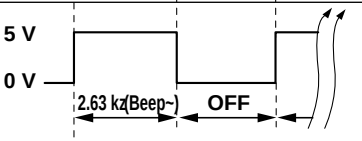
1. This circuit makes standby power 0 by cutting off power supplied to Iss inside of the fan motor in the fan motor OFF.
2. This circuit prevents over-driving the fan motor by cutting off power applied to the fan motor in the lock of fan motor by sensing the operation RPM of the fan motor.

	ⓐ part	ⓑ part
MOTOR OFF	2V or less	0V
MOTOR ON	13V~15V	0V

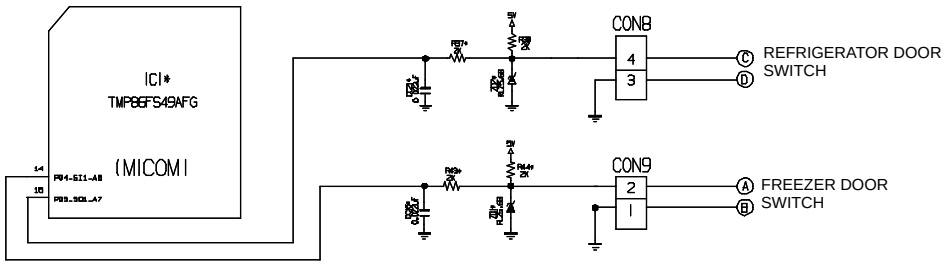


3. Buzzer Drive Condition Check



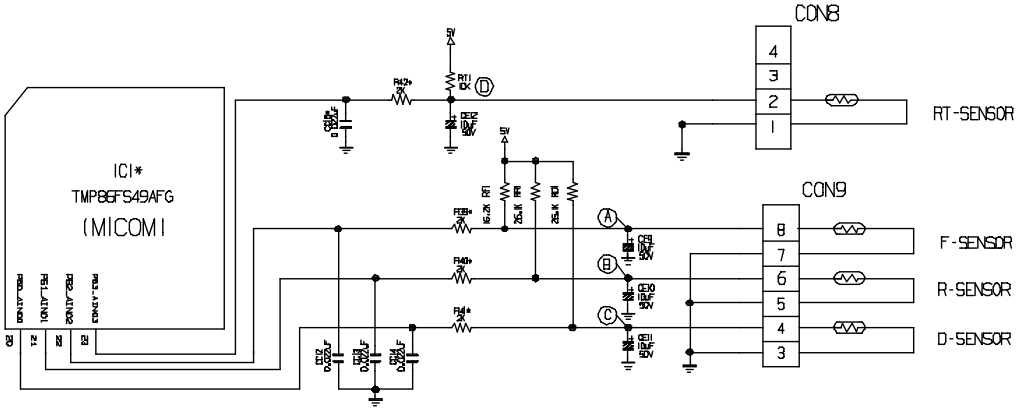
Condition / Measure-ment Location	Tone (Ding~Dong~) when the button on the display is pushed.	Alarm for open door (beep-beep-beep)	OFF
IC1 (Ⓐ)			**0 V**
IC1 (Ⓑ)			**0 V**

4. Open Door Detection Circuit Check



Freezer/ Refrigerator Door / Measurement Location	Pin No. 15 (Freezer Door) Pin No. 14 (Refrigerator Door)
Closed	**5 V**
Open	**0 V**

8-2-5 Temperature Sensor Circuit

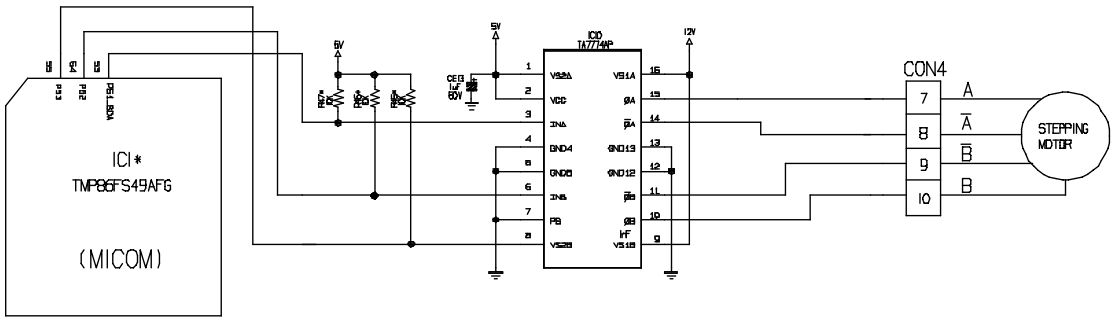


The upper CIRCUIT reads REFRIGERATOR temperature, FREEZER Temperature, and DEFROST-SENSOR temperature for defrosting and the indoor temperature for compensating for the surrounding temperature into MICOM.
OPENING or SHORT state of each TEMPERATURE SENSOR are as follows:

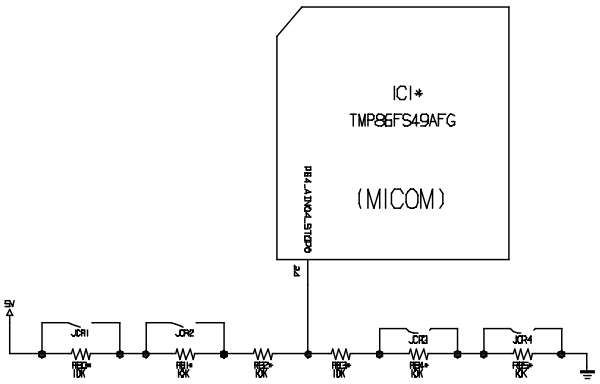
SENSOR	CHECK POINT	NORMAL (-30iC ~ 50iC)	SHORT-CIRCUITED	OPEN
Freezer Sensor	POINT Ⓐ Voltage	0.5 V ~ 4.5 V	0 V	5 V
Refrigerator Sensor	POINT Ⓑ Voltage			
Defrosting Sensor	POINT Ⓒ Voltage			
Room Temperature sensor	POINT Ⓓ Voltage			

8-2-6 Refrigeration Compartment Stepping Motor Damper Circuit

* The circuit shown below is the damper circuit to regulate the refrigerator temperature.



8-2-7 Temperature compensation & overcooling/undercooling compensation circuit



OPTION	CUTTING	Remark
JCR1	R +1.0 deg compensation	Warmer
JCR2	R +1.0 deg compensation	
JCR3	R -1.0 deg compensation	
JCR4	R -1.0 deg compensation	Colder

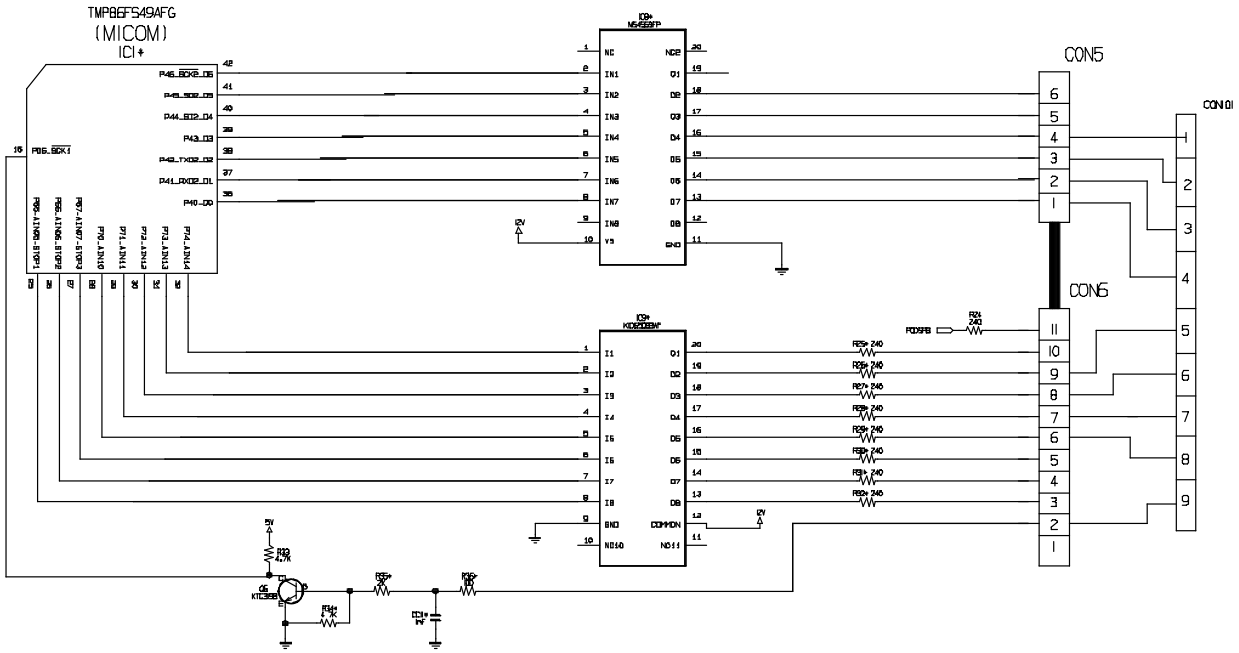
Table of temperature compensation by cutting JUMP WIRE to easy SVC temperature adjustments
+1deg, +1deg, -1deg, -1deg.

Four oprion are available for R Compensations by CUTTING JUMP WIRE.

Example 1) CUTTING JCR1 and JCR2: R +2 deg compensation
Example 2) CUTTING JCR1 and JCR3: no compensation in R compartment.
Example 3) CUTTING JCR1, JCR2 and JCR3: compensation of temp +1deg +1deg = +1deg.

8-2-9 Key Button Input & Display Light-On Circuit

? The circuit shown above determines whether a function control key on the operation display is pushed. It also turns on the corresponding function indication LED (LED Module) SEVEN SEGMENT DISPLAY (SEVEN SEGMENT DISPLAY MODULE). The drive type is the scan type



8-3 RESISTANCE SEPECIFICATION OF SENSOR

TEMPERATURE DETECTED BY SENSOR	RESISTANCE OF FREEZER SENSOR	RESISTANCE OF REFRIGERATOR & DEFROST SENSOR & ROOM SENSOR
-20º C	22.3 K Ω	77 K Ω
-15º C	16.9 K Ω	60 K Ω
-10º C	13.0 K Ω	47.3 K Ω
- 5º C	10.1 K Ω	38.4 K Ω
0º C	7.8 K Ω	30 K Ω
+ 5º C	6.2 K Ω	24.1 K Ω
+ 10º C	4.9 K Ω	19.5 K Ω
+ 15º C	3.9 K Ω	15.9 K Ω
+ 20º C	3.1 K Ω	13 K Ω
+ 25º C	2.5 K Ω	11 K Ω
+ 30º C	2.0 K Ω	8.9 K Ω
+ 40º C	1.4 K Ω	6.2 K Ω
+ 50º C	0.8 K Ω	4.3 K Ω

- The resistance of the SENSOR has a ±5% common difference.
- Measure the resistance of the SENSOR after leaving it for over 3 minutes in the measuring temperature. This delay is necessary due to sensor response speed.

8-4 TROUBLESHOOTING

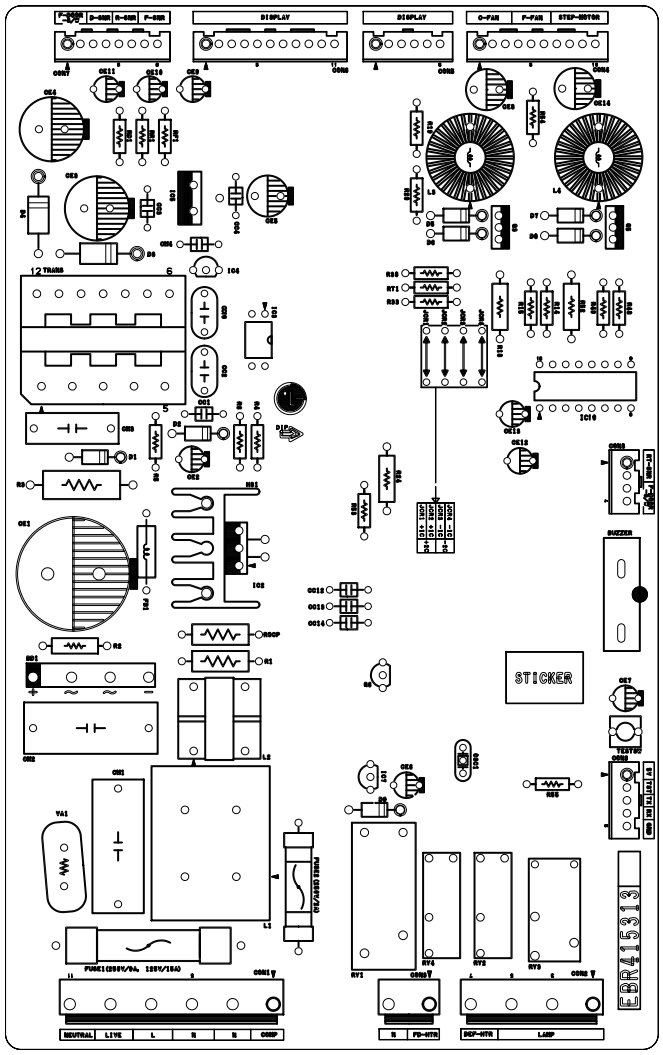
PROBLEM	INDICATED BY	CHECK	CHECKING METHOD	CAUSE	SOLUTION
POWER SOURCE is poor.	1. The whole DISPLAY LED/SEVEN SEGMENT DISPLAYis off. 2. DISPLAY LED/ SEVEN SEGMENT DISPLAY operates abnormally	1. FREEZER/ REFRIGERATOR.	Check if FREEZER/ REFRIGERATOR DOOR IS OPEN and check display.	POWER SOURCE is poor.	Check outlet Voltage.
		2. If LAMP is dim.	Check visually.	Applied voltage error.	Use boosting TRANS.
		3. The connection of the MAIN PWB CONNECTOR.	Check connection of CONNECTOR.	CONNECTOR connection is poor.	Reconnect CONNECTOR.
				TRANS FUSE is open.	Replace TRANS.
COOLING is poor.	NO COOLING.	1. If the COMPRESSOR operate.	USE TEST MODE1 (forced COOLING). If less than 7 minutes pass after compressor shuts off, don't press the KEY and wait.	COMPRESSOR locked or blocked.	Replace COMPRESSOR.
				OLP, PTC is poor. COMPRESSOR RELAY is poor.	Replace OLP, PTC. Replace MAIN PWB.
				THE CONNECTING WIRE is poor.	Check the connection of the black wire of the MAIN PWB CONNECTOR (CON2).
		2. If refrigerant is leaking.	Measure the amount of frost sticking on EVAPORATOR and the surface temperature of the condenser pipe.	Refrigerant leakage.	Replace the leaking part and replace any lost refrigerant.
	FREEZER TEMPERATURE is incorrect	1. If FANMOTOR operates.	USE TEST MODE1 (forced COOLING).	FAN MOTOR is poor.	Replace the FAN MOTOR.
				CONNECTING WIRE is poor.	Refer to 8-2-4. 2 and check
		2. If DEFROSTING is normal.	Check the amount of frost sticking on the EVAPORATOR .	DEFROSTING is poor.	See **DEFROSTING is poor**.
		3. If SENSOR is normal.	Check the resistance of the Refrigerator SENSOR.	SENSOR RESISTANCE is poor.	Replace SENSOR.
		4. Door Line contact.	Check the seal when the door is closed.	Door liner damaged.	Replace door liner.

PROBLEM	INDICATED BY	CHECK	CHECKING METHOD	CAUSE	SOLUTION
COOLING is poor.	If REFRIGERATOR TEMPERATURE is too low.	1.If FREEZER TEMPERATURE isn ormal.	Check is FREEZER TEMPERATURE is too low.		Make sure the DOOR isattached.
		2. If amount of cool air from FAN MOTOR is sufficient.	Make sure that the amount and speed of cool air are sufficient by touching the check supplied on the REFRIGERATOR.	FAN MOTOR is poor.	Replace FAN MOTOR.
				Passage of cool air is blocked.	Remove impurities.
				EVA frozen.	See **DEFROSTING is poor**.
		3. Door Line contact.	Check door seal when door is closed.	Door liner damaged.	Replace Door liner.
DEFROSTING is poor.	NO DEFROSTING.	1. If HEATER emits heat.	USE TEST MODE3 (forced DEFROSTING).	HEATER disconnection.	Replace HEATER.
				TEMPERATURE FUSE disconnection.	Replace TEMPERATURE FUSE.
				Connection is poor.	Check EVAPORATOR connection and wire of MAIN PWB CONNECTOR.
				DEFROST-SENSOR is poor.	Replace DEFROST-SENSOR.
				HEATER RELAY is poor.	Replace RY2 of MAIN PWB.
		2. If DRAIN PIPE is blocked.	Check DRAIN PIPE.	DRAIN PIPE is blocked.	Remove ice and impurities.
					Check HEATER PLATE resistance.
		3. If ice remains after DEFROSTING.	Make sure that DEFROST SENSOR is connected.	Connection is poor.	Reassemble the DEFROST-SENSOR.
			Make sure that FREEZER / REFRIGERATOR DOOR is closed.	DOOR does not close properly.	Reassemble DOOR.
					Replace GASKET.

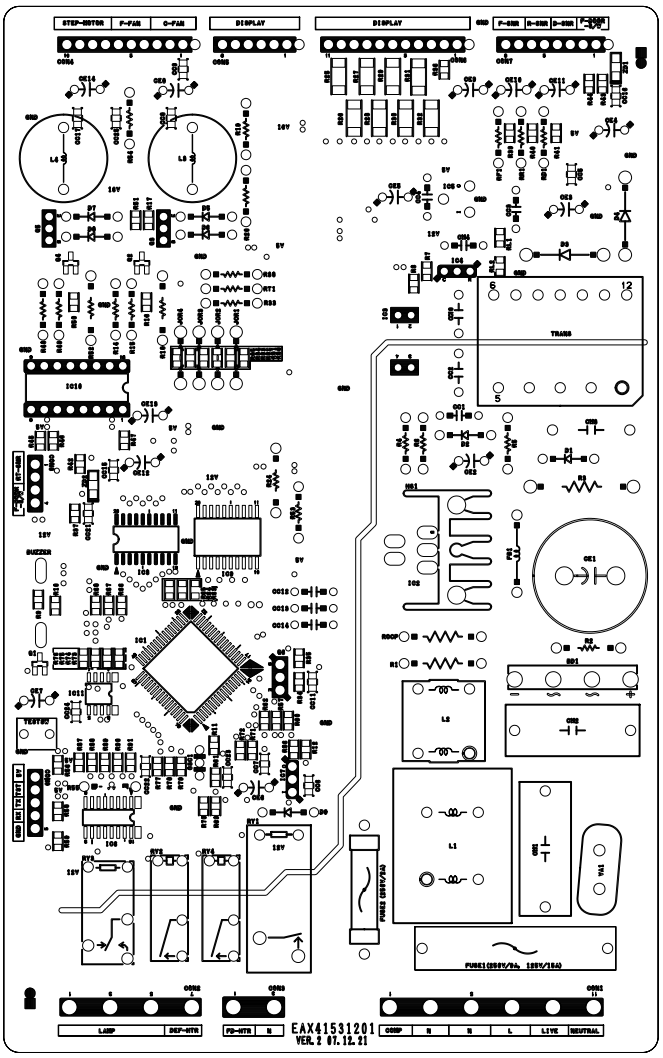
8-5 MAIN PWB ASSEMBLY AND PARTS LIST

8-5-1 Main PWB Assembly

TOP VIEW

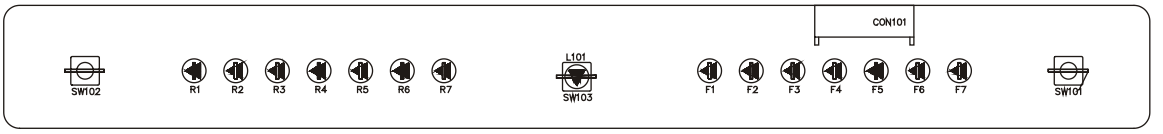


BOTTOM VIEW



No	P/NO	DESCRIPTION	SPEC	MAKER	REMARK
1	EAX41531201	PNB(PCB)	BRAVO30 PJT, 2BLDC VER. 2	DOO SAN	T:1.6
2					
3	6170JB2012A	TRANSFORMER,SMPS(COIL)	DL-PJT 2.9MH/20W	SAM IL,SMC	TRANS
4	6170JB2012B	TRANSFORMER,SMPS(COIL)	GR-207,BLDC 100V-127V	SAM IL,SMC	
	6170JB2012C				
5					
6	EAF36838801	PROTECT DEVICE,FUSE	6.3A/125V SLOW-BLOW KS AXIAL BK	ORISEL	FUSE1
7	EAF36838802	PROTECT DEVICE,FUSE	6.3A/250V SLOW-BLOW KS AXIAL BK	ORISEL	
8	0FZZJB3001A	PROTECT DEVICE,FUSE	250V T2A 52S020H(SLOW-BLOW) LITTELFUSE TRIAD	ORISEL	FUSE2
9					
10	6630VW0111	CONNECTOR (CIRC),WAFER	YW396 YEON-HO I/P 3.96MM YW396-11AV (I/P:2,4,6,8,10)	YEON HO	CON1
11	6630A09106C	CONNECTOR (CIRC),WAFER	YW396-07AV YEON-HO 7PIN 3.96MM STRAIGHT SN	YEON HO	CON2
12	6630A09106A	CONNECTOR (CIRC),WAFER	YW396-03AV 3P 3.96MM I/R STRAIGHT	YEON HO	CON3
13	6630JB8004J	CONNECTOR (CIRC),WAFER	SMW250-10P 10P 2.50MM I/R STRAIGHT	YEON HO	CON4
14	6630JB8004E	CONNECTOR (CIRC),WAFER	SMW250-06P 6P 2.50MM I/R STRAIGHT	YEON HO	CON5
15	6630JB8004K	CONNECTOR (CIRC),WAFER	SMW250-11P 11P 2.50MM I/R STRAIGHT	YEON HO	CON6
16	6630JB8004G	CONNECTOR (CIRC),WAFER	SMW250-08P 8P 2.50MM I/R STRAIGHT	YEON HO	CON7
17	6630JB8004C	CONNECTOR (CIRC),WAFER	SMW250-04P 4P 2.50MM I/R STRAIGHT	YEON HO	CON8
18	6630JB8004D	CONNECTOR (CIRC),WAFER	SMW250-05P 5P 2.50MM I/R STRAIGHT	YEON HO	CON9
19					
20	6102W5V007A	VARISTOR	INR14D331K 330V 10% UL/CSA/VDE BK ILJIN	IL JIN	VA1
			SVC331D-14A	SAMWHA	
			TVR14331	THINKING	
21	6102JB9001B	VARISTOR	SVC621D-14A SAMWHA UL/VDE BK 620V	SAMWHA, IL JIN	
22	6920000001A	RELAY	ALE15B12 MATSUSHITA 250VAC 16A 12VDC 1A NO VENTING,1POLE	MATSUSHITA	RY1
	6920JB2005B		G5JS-1A-NT-12VDC AC250V DC12V 16A 1A UL/CSA/VDE LEAD	OMRON	
	6920JB2005C		DHIU 11 AC250V DC12V 16A 1A UL/CSA/TUV/SEMKO LEAD	DEC	
	EBB35235101		OMIH-SS-112LM QEG AC240V DC12V 16A 1A UL/CSA/VDE/SEMKO DIP QEG	TYCO	
23	6920JB2003H	RELAY	G5NB-1A-E 5VDC AC250V DC5V 5A 1A UL/CSA/VDE 20.5*7.2*15.3 DIP	OMRON	RY2,RY4
	6920JB2003D		G5NB-1A-E-12VDC(JPN) AC250V/DC30V DC12V 5A 1A UL/CSA/VDE	OMRON	
	6920JB2003E		G5NB-1A-E-12VDC(CHN) AC250V/DC30V DC12V 5A 1A UL/CSA/VDE	OMRON	
24	6920JB2005B	RELAY	G5SB-14 OMRON 250VAC 5A 12VDC IC NO VENTING,1POLE	OMRON	RY3
25	6212BA3041A	OSCILLATOR,RESONATOR,CERAMIC	CSTLS4M00G53-A0 MURATA 4MHZ +/-0.5% TA 15PF	MURATA	OSC1
26					
27	EAN44005901	IC,MICROCONTROLLERS	TMP86FS49AFG TOSHIBA 64P BULK FLASH BRAVO30 ENERGY STAR '08	TOSHIBA	IC1
28	EAN44005902	IC,MICROCONTROLLERS	TMP86FS49AFG TOSHIBA 64P BULK FLASH BRAVO33 BETTER ENERGY STAR '08	TOSHIBA	
29	EAN44005903	IC,MICROCONTROLLERS	TMP86FS49AFG TOSHIBA 64P BULK FLASH WINNER2 GOOD/BETTER ENERGY STAR '08	TOSHIBA	
30	EAN44005904	IC,MICROCONTROLLERS	TMP86FS49AFG TOSHIBA 64P BULK FLASH WINNER2 BEST ENERGY STAR '08	TOSHIBA	
31	EAN44005905	IC,MICROCONTROLLERS	TMP86FS49AFG TOSHIBA 64P BULK FLASH BRAVO33 BASIC	TOSHIBA	
32					
33	0IPM6SK001A	IC,HIC	STR-G6251 15.8TO19.4V 9.1TO11.1V SWITCHING REGULATOR ZIP ST 5P	SANKEN	IC2
34	0IPM6NE001A	PHOTO COUPLER	PS2561L1-1-V NEC 4P,DIP BK : TLP721F	NEC	IC3
35	0IKE431I000A	IC,VOLTAGE REGULATOR	KIA431 36V 36V 700MW TO92 TP 3P	KEC	IC4
36	0IKE7805001W	IC,VOLTAGE REGULATOR	KIA7805API 7T0210V 5V 2W T0220IS ST 3P	KEC	IC5
37	0IKE650030C	IC,LED DRIVER	KID65003AF 16 SOP BK 7CH DRIVE	KEC	IC6
38	0IKE704200A	IC,VOLTAGE DETECTOR	KIA7042P -0.3T01.5V 4.2V 400MW TO92 TP RESET 3P	KEC	IC7
39	0ISTLM1001A	IC,LOGIC IC	M54563FP MITSUBISHI 20 P/TP CONVERT	MITSUBISHI	IC8
40	0IKE650830B	IC,LED DRIVER	KID65083AF -0.5T030V -0.5T050V 350MW DIP ST 20P	KEC	IC9
	EAN34119001		ULN2803AF 0V TO 30V -0.5V TO 30V 480MW SOL P/TP 18P	TOSHIBA	
41	0ITD777400A	IC,MOTOR DRIVER	TA7774AP 16,SDIP BK DRIVE,IC STEPPING MOTOR	TOSHIBA	IC10
42	0IRH934600D	IC,EEPROM	BR93LC46RF-W 8PIN SOP BK EEPROM,1KBIT	ROHM	IC11
43					
44	0ISTLKE005A	TRANSISTOR,BIPOLAR	KRC106S KEC SOT-23 TP TRANSISTOR	KEC	Q1
45	0TPKE80052A	TRANSISTOR,BIPOLAR	KTC3875S NPN 5V 60V 50V 150MA 100NA 70TO700 150MW SOT23 P/TP 3P	KEC	Q2,Q4
46	0TPKE00009A	TRANSISTOR,BIPOLAR	KTB1151 PNP -7V -60V -60V -5A -0.0000IA 160TO400 1.5W TO126 ST 3P	KEC	Q3,Q5
47	0TR319809AA	TRANSISTOR,BIPOLAR	KTC3198(BK)(TC1B151) NPN 5V 60V 50V 150MA 100NA 70TO700	KEC	Q6
48					
49	0DB3500004A	DIODE,BRIDGE	D3SBA60 600V 1.05V 10UA 8DA SIP ST 4P 4	SHINDENGEN	BD1
50	0DZMM001BBA	DIODE,ZENER	RLZ5.6B 5.6V 5.45T05.73V 130HM 500MW LL34 P/TP 2P 1	ROHM	ZD1,ZD2
51	0DRI07009AA	DIODE,RECTIFIER	FR107 TP RECTRON D041 1000V 1A 30A 500NSEC 5A	DELTA	D1,D2,D5-D8
52	0DRSA00070A	DIODE,RECTIFIER	RL2 BK SANKEN D041 400V 2.0A 40A 0.65EC 10UA	SANKEN	D3,D4
53	0DD4004056AC	DIODE,RECTIFIER	IN4004(156AM) TP DO204AL 400V 1A 30A 30UA	DELTA	D9
54					
55	6210JB8001A	FILTER,BEAD	BFS3510A0L 150OHM 3.5X10MM AXIAL TP	SAM WHA	FB1
56	6200JB3004A	FILTER,LINE NOISE	CV9700120 7A 2MH	TNC	L1
57	EAM60202101	FILTER,LINE NOISE	CV613240 TNC BK 1.3A 24MH	TNC	L2
58	0LRI001M4F0	INDUCTOR,WIRE WOUND,RADIAL	NH510A00 1MH 20% 1.5KV 1A 10HM 60HZ 1 NON SHIELD 18.5MM x17MM 12MM TR	TNC	L3,L4
59					
60	0CD4741B670	CAPACITOR,FILM BOX	0.47UF 20% 275V MPP -40TO+85C NON-IND 26X11.5X21MM 22.5MM BK	PILKOR	CM1,CM2
61	0CF4731Y470	CAPACITOR,FILM BOX	0.047UF 0.05PF 630V PP -10TO+85C IND 12.5X5X11MM 12.5MM BK	PILKOR	CM3
62	0CK1040K949	CAPACITOR,CERAMIC,AXIAL	100nF -20TO+80% 50V Y5V -25TO+85C 3.5X1.9MM 1.5MM TA52	SAM WHA	CM4
63					
64	0CE476ZV6E0	CAPACITOR,AL,RADIAL	47uF 20% 450V 550MA -25TO+105C MT 2000HR 22X25MM 10MM SNAP IN BK	SAM WHA,SAM YOUNG	CE1
65	0CE226BK638	CAPACITOR,AL,RADIAL	22uF 20% 50V 79MA -55TO+105C MT 1000HR 5X11MM 5MM FORMING TP	SAM WHA,SAM YOUNG	CE2
66	0CE687YH6E0	CAPACITOR,AL,RADIAL	680UF 20% 25V 780A -25TO+80C RD 2000HR 10X12.5MM 10MM DIP BK	SAM WHA,SAM YOUNG	CE3
67	0CE687YJ618	CAPACITOR,AL,RADIAL	680UF 20% 35V 740MA -55TO+105C MT 2000HR 12.5X16MM 5.08MM STRAIGHT TP	SAM WHA,SAM YOUNG	CE4
68	0CE227BF638	CAPACITOR,AL,RADIAL	220uF 20% 16V 255MA -55TO+105C LP 1000HR 8X11.5MM 5MM FORMING TP	SAM WHA,SAM YOUNG	CE5
69	0CE105EK638	CAPACITOR,AL,RADIAL	1UF 20% 50V 13MA -55TO+105C MT 5X11MM 5MM FORMING TP	SAM WHA,SAM YOUNG	CE6,CE13
70	0CE476BH638	CAPACITOR,AL,RADIAL	47uF,KME,R6,YX,25V,20%,FM5,TP5	SAM WHA,SAM YOUNG	CE7
71	0CE227BH638	CAPACITOR,AL,RADIAL	220uF 20% 25V 277MA -55TO+105C LP 1000HR 8X11.5MM 5MM FORMING TP	SAM WHA,SAM YOUNG	CE8,CE14
72	0CE105EK638	CAPACITOR,AL,RADIAL	10UF 20% 50V 54MA -55TO+105C MT 5X11MM 5MM FORMING TP	SAM WHA,SAM YOUNG	CE9-CE12
73					
74	EAE34823301	CAPACITOR,CERAMIC,RADIAL	2.2nF 20% 250V SD -25TO+85C 9X7MM 5MM BK	SAM WHA	CC2,CC10
75	0CK4710K559	CAPACITOR,CERAMIC,AXIAL	470pF -20TO+80% 50V Y5P -20TO+85C 2.3X2.0MM 10MM TA52	SAM WHA	CC1
76	0CK1040K949	CAPACITOR,CERAMIC,AXIAL	0.1uF -20TO+80% 50V Y5V -25TO+85C 3.5X1.9MM 1.5MM TA52	SAM WHA	CC3,CC4
77	0CK2230K949	CAPACITOR,CERAMIC,AXIAL	22nF -20TO+80% 50V Y5V -25TO+85C 3.5X1.9MM NONE TA52	SAM WHA	CC12-CC14
78					
79	0CK104DK94A	CAPACITOR,CERAMIC,CHIP	0.1UF,2012,50V,80/-20%,F1Y5V1,R/TP	MURATA	CC5-CC7,CC23,CC24
80	0CK223DK96A	CAPACITOR,CERAMIC,CHIP	22NF -20TO+80% 50V X7R -55TO+125C 2012 TP	MURATA	CC8,CC15-CC17,CC21,CC22
81	0CK102DK96A	CAPACITOR,CERAMIC,CHIP	1nF 20% 50V X7R -55TO+125C 2012 TP	MURATA	CC9,CC11,CC25
82					
83	EBC3206640I	RESISTOR,SURGE	PRC_03 330KOHM 5% 1/4W 12X4MM OM AXIAL TA52	SMART	R1
84	EBC3176310I	RESISTOR,SURGE	PRC 560KOHM 5% 1/2W 10X4MM 26MM AXIAL BK	SMART	R2
85	EBC3206650I	RESISTOR,SURGE	PRC_04 56KOHM 5% 2W 15.0X5.5MM 12.5MM AXIAL BK	SMART	R3
86	0RD6201K609	RESISTOR,CARBON FILM	6.8KOHM 5% 1/4W 6.5X2.3MM NONE AXIAL TA52	SMART	R4
87	0RD4700K609	RESISTOR,CARBON FILM	47 OHM,1/4W,5%,TA52	SMART	R5
88	0RD6800K609	RESISTOR,CARBON FILM	680OHM 5% 1/4W 6.5X2.3MM NONE AXIAL TA52	SMART	R6
89	0RS010IJ609	RESISTOR,METAL OXIDE FILM	10HM 5% 1W 9.0X3.0MM - AXIAL TA52	SMART	ROCP
90	0RS012IJ609	RESISTOR,METAL OXIDE FILM	1.20HM 5% 1W 9.0X3.0MM NONE AXIAL TA52	SMART	ROCP
91	0RD3901G609	RESISTOR,CARBON FILM	3.9KOHM 5% 1/4W 6.5X2.3MM - AXIAL TA52	SMART	R15,R49
92	0RD1501H609	RESISTOR,CARBON FILM	1.5KOHM 5% 1/2W 9.0X3.0MM - AXIAL TA52	SMART	R18,R52
93	0RD2001G609	RESISTOR,CARBON FILM	2KOHM 5% 1/4W 6.5X2.3MM NONE AXIAL TA52	SMART	R19,R38,R53,R55
94	0RD2400H609	RESISTOR,CARBON FILM	240OHM 5% 1/2W 9.0X3.0MM 26.0MM AXIAL TA52	SMART	R24
95	0RD4701G609	RESISTOR,CARBON FILM	4.7KOHM 5% 1/4W 6.5X2.3MM NONE AXIAL TA52	SMART	R14,R20,R33,R48,R54
96	0RN2610G409	RESISTOR,METAL FILM	26.1KOHM 1% 1/4W 1% TA52	SMART	RD1,RR1
97	0RNI002G409	RESISTOR,METAL FILM	10KOHM 1% 1/4W 6.5X2.3MM NONE AXIAL TA52	SMART	RT1
98	0RNI6226409	RESISTOR,METAL FILM	16.2KOHM 1% 1/4W 6.5X2.3MM NONE AXIAL TA52	SMART	RF1
99					
100	0RJI001E672	RESISTOR,CHIP	1KOHM 5% 1/8W 2012 R/TP	ROHM	R7,R9
101	0RJ910IE472	RESISTOR,CHIP	9.1KOHM 1% 1/8W 2012 R/TP	ROHM	R11
102	0RJ240IE472	RESISTOR,CHIP	2.4KOHM 1 1/8W 2012 R/TP	ROHM	R12
103	0RD2001E672	RESISTOR,CHIP	2KOHM 5% 1/8W 2012 R/TP	ROHM	R8,R35,R37,R39-R44
104	0RD1002E672	RESISTOR,CHIP	10KOHM,1/8W,5%,2012,R/TP	ROHM	R16,R45-R47,R50,R63-R72,R77-R85
105	0RH4701L622	RESISTOR,CHIP	4.7KOHM,1/8W,5%,2012,D	ROHM	R12,R34,R56-R59,R73-R76,R87-R91
106	0RJ2400H680	RESISTOR,CHIP	240OHM 5% 1/2W 5025 R/TP	ROHM	R25-R32
107	0RH2200L622	RESISTOR,CHIP	220OHM 5% 1/8W 2012 R/TP	ROHM	R10
108	0RHI004L622	RESISTOR,CHIP	1MOHM,1/8W,5%,2012,R/TP	ROHM	R11
109	0RH3300L622	RESISTOR,CHIP	330OHM 5% 1/8W 2012 R/TP	ROHM	R17,R51
110	0RHI000L622	RESISTOR,CHIP	100OHM 5% 1/8W,5%,,2012,R/TP	ROHM	R36,R86
111	0RJI500E672	RESISTOR,CHIP	150OHM 5% 1/8W 2012 R/TP	ROHM	R60-R62
112					
113					
114	1SBF030241B	SCREW,TAPTITE	BH + S 3MM 8MM M3WR FZY	HAENG SUNG	-
115	4920JB3007A	HEAT SINK	23.3*17*25 DRIVE IC STR R-S64,65,73 2PIN I-SCREW 3MM -	I(C2)	I(C2)
116	6260JB3002F	BUZZER,PIEZO	85DB 30V 2KHZ 22X25.5X7MM PIN	DAE YOUNG	BUZZER
117	6315450001A	JUMP WIRE	0.6MM 52MM TP TAPING SN	DAE A LEAD	JCR1-JCR4, FB1(15MM)
118	6605P0000DB	SWITCH,TACT	JPT1212B JEIL 12VDC 50MA	NAMAE	TEST S/W
119	5SD000008AA	SOLDER (ROSIN WIRE) RSO	SR-34 PB-FREE, LFM-48	-	-
120	5SWZU-L05AA	SOLDER,SOLDERING	LFM-38, SN 3.0AG -0.5CU% 3.0MM	HUISUNG	-
121	7245ZB0004A	FLUX	SV-PBF-06 KSK 12.5 WT% 0.815+-0.003	KOKI	-

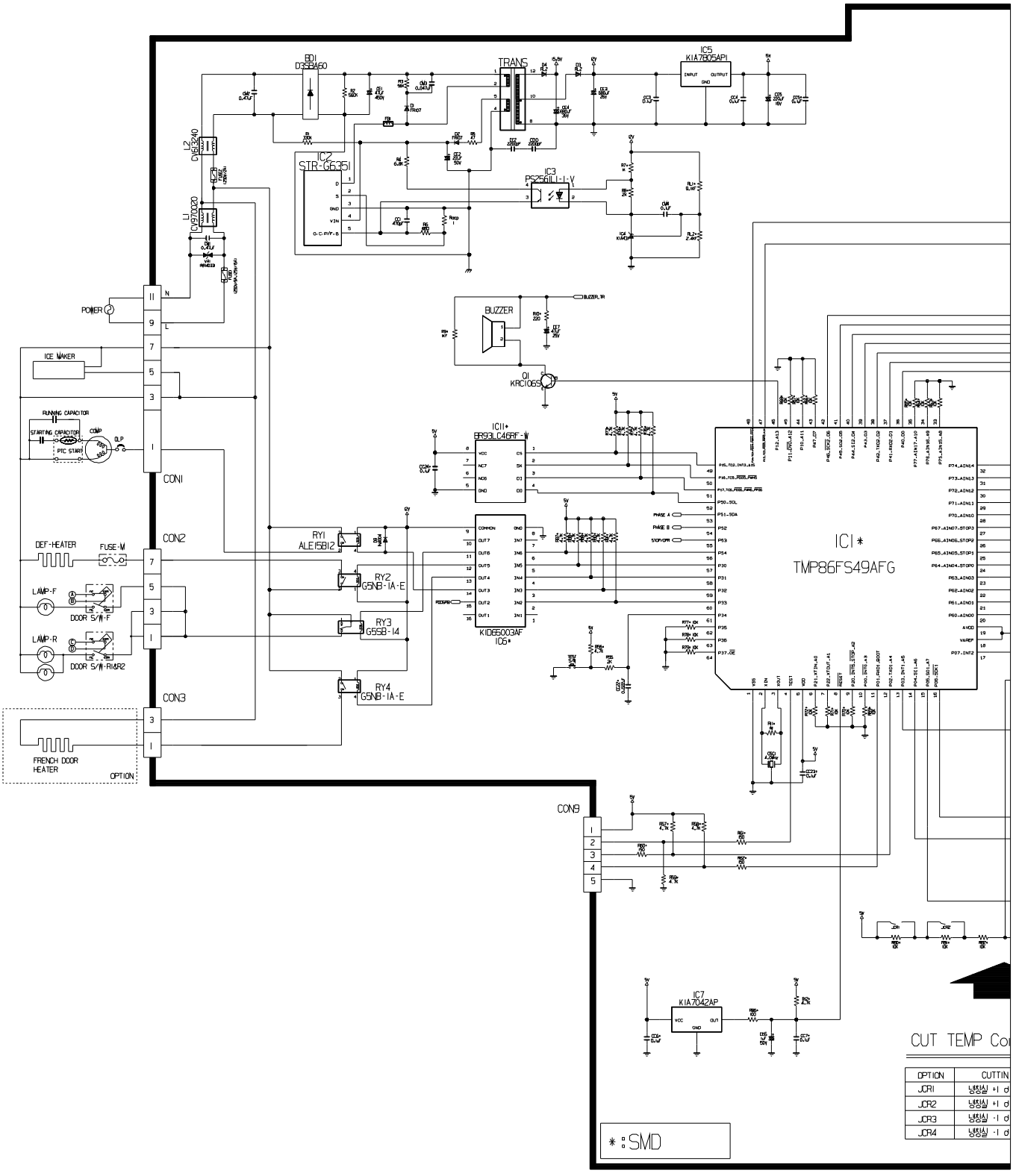
8-5-3 PWB Assembly, Display and parts list

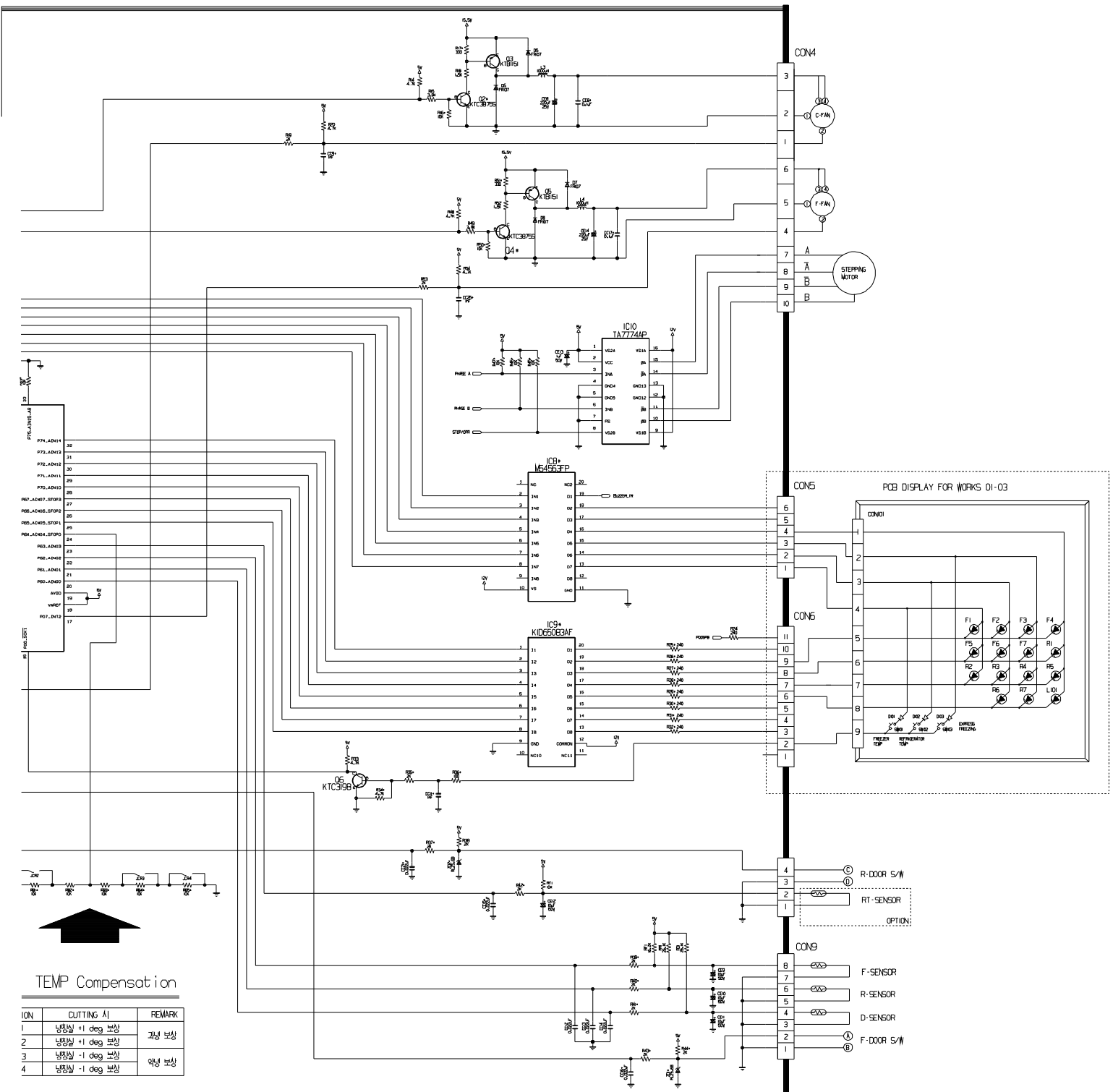


Qty	No	P/N□	DESCRIPTI□N	SPEC	MAKER	REMARK
1	1	6870JB8091A	PWB(PCB)	KS-PJT G□□D/BETTER DISPLAY	D□□ SAN	t=1.6
	2					
1	3	6630AQ9159H	WAFER	SMAW250-09	YE□N H□	C□N101
	4					
2	5	6600RRT002K	SWITCH,TACT	JTP1230A JEIL 12V DC 50MA	JEIL	SW101,102
		6600JB8005A		KPT-1105A	KYUNG IN	
1	6	-	TACT S/W	KPT-1109G	KYUNG IN	SW103
14	7	0DLLE0019AA	LED	LT1824-81-BCM TP GREEN 2		R1~R7,F1~F7
3	8	0DD414809AA	DI□DE,SWITCHING	1N4148 26MM	PYUNG CHANG DELTA	D101,102,103
12	10	6854B50001A	JUMP WIRE	0.6MM 52MM TP TAPING SN (10MM)	-	J101~J112
	11					
-	12	9VWF0120000	S□LDER(R□SIN WIRE) RS0	D1.20	HEE SUNG	-
001	13	49111004	S□LDER,S□LDERING	H63A	-	-
000025	14	59333105	FLUX	SG;0.825-0.830 K□REA F.H-206	K□KI	-

8-6 PWB DIAGRAM

8-6-1 PWB Main Assembly





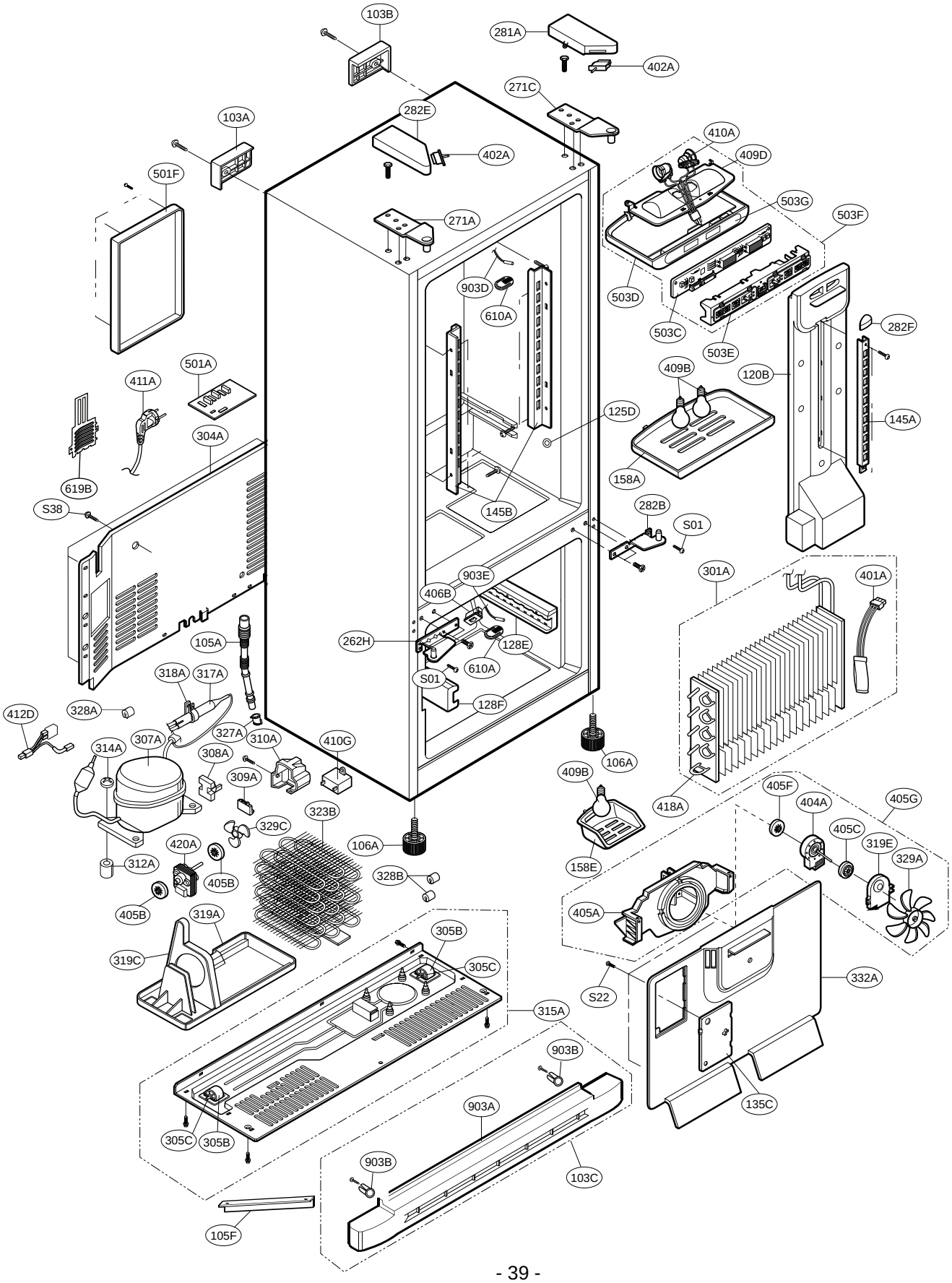
TEMP Compensation

ION	CUTTING 시	REMARK
1	냉장실 +1 deg 보상	과냉 보상
2	냉장실 +1 deg 보상	
3	냉장실 -1 deg 보상	약냉 보상
4	냉장실 -1 deg 보상	

9.EXPLODED VIEW AND REPLACEMENT PARTS LIST

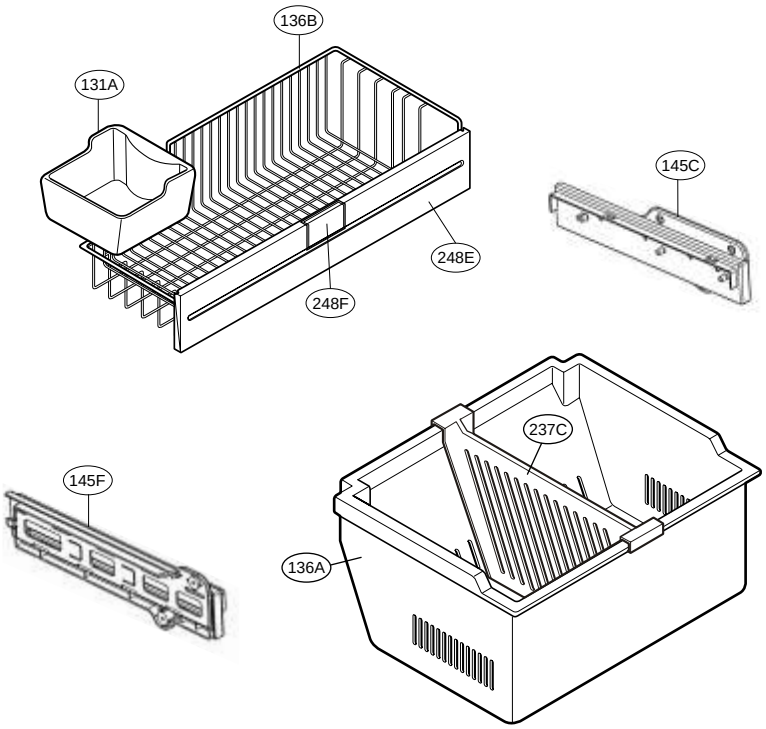
CASE PARTS

CAUTION: use the part number to order part, not the position number.



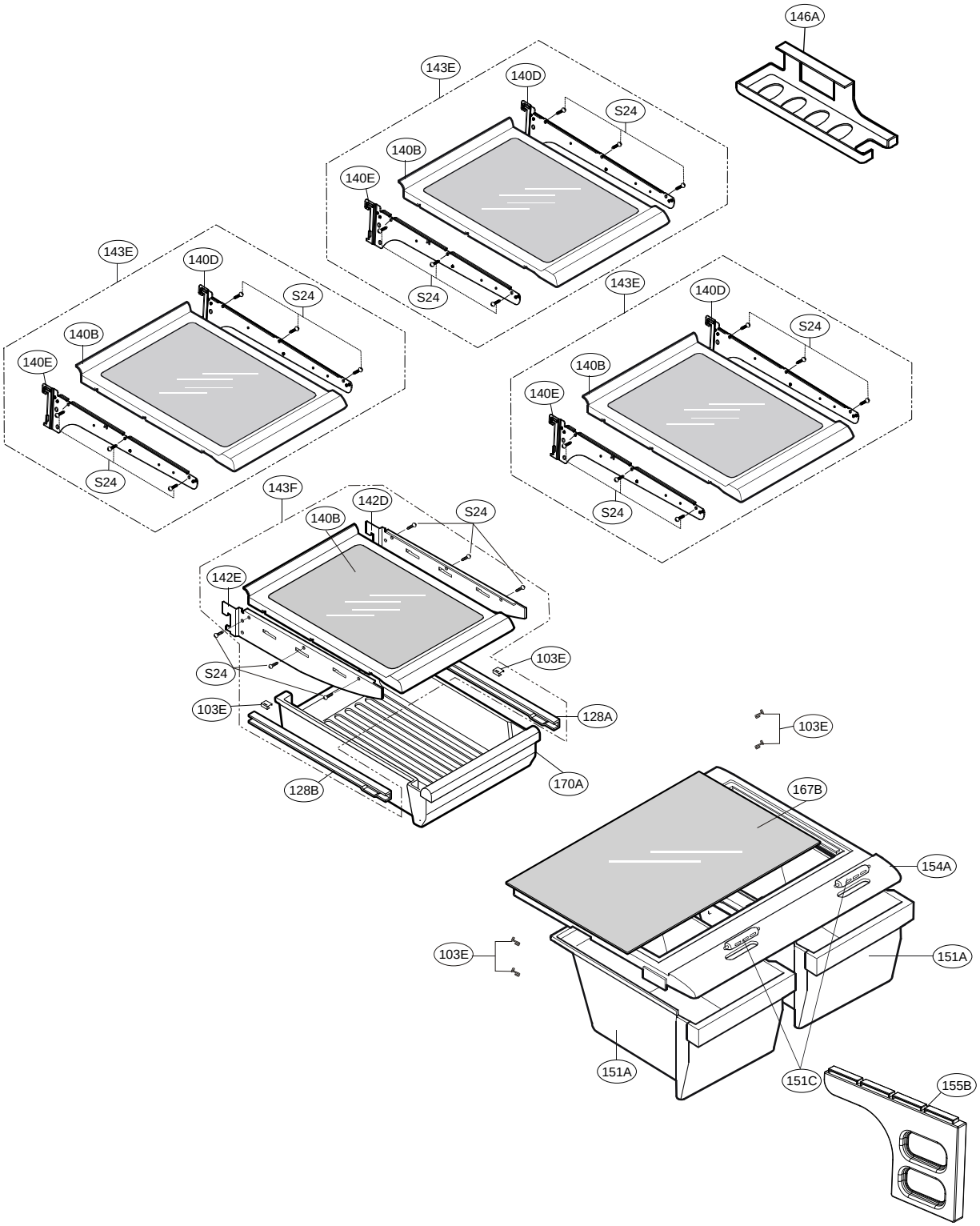
FREEZER PARTS

CAUTION: Use the part number to order part, not the position number.



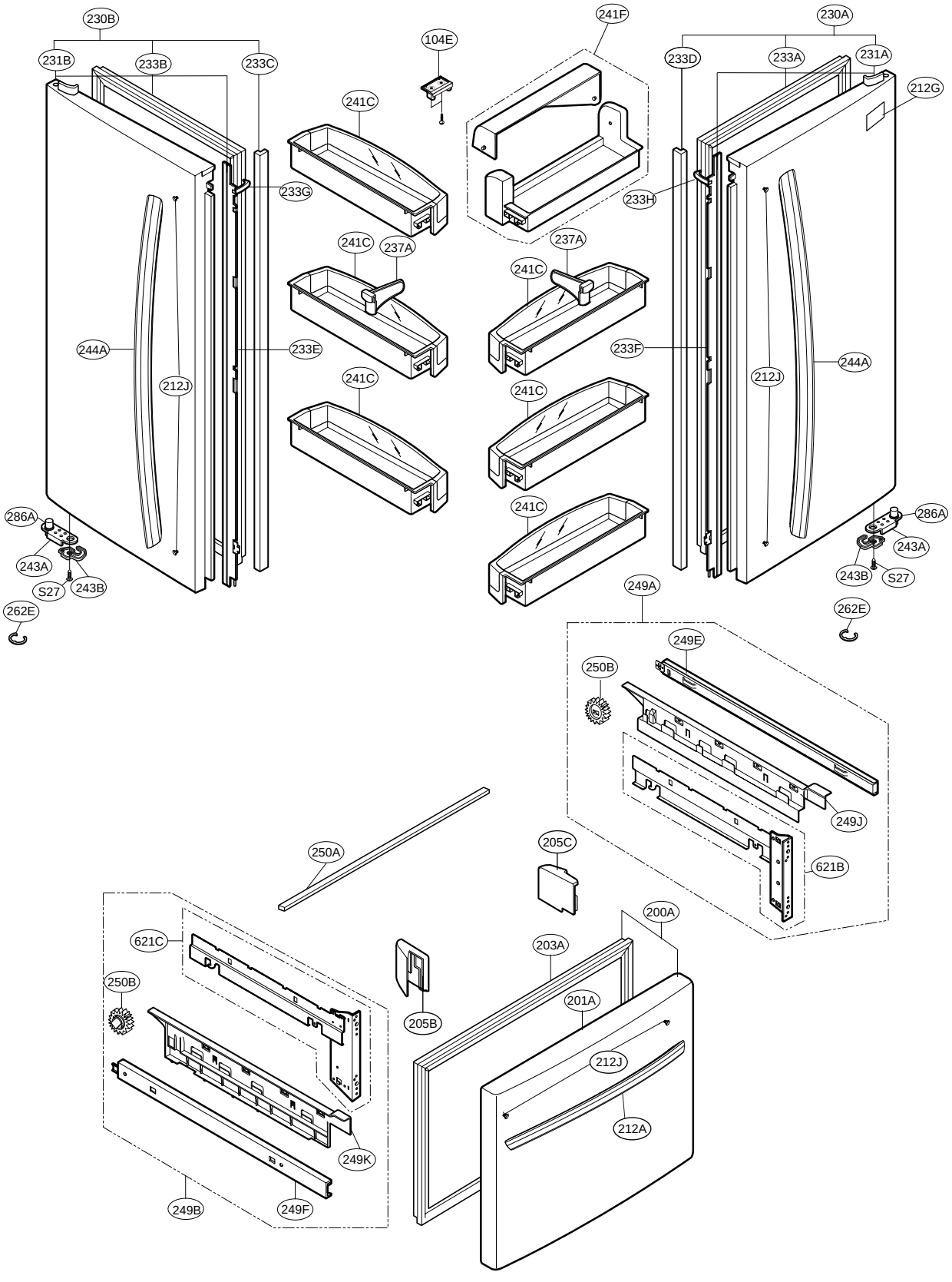
REFRIGERATOR PARTS

CAUTION: Use the part number to order part, not the position number.



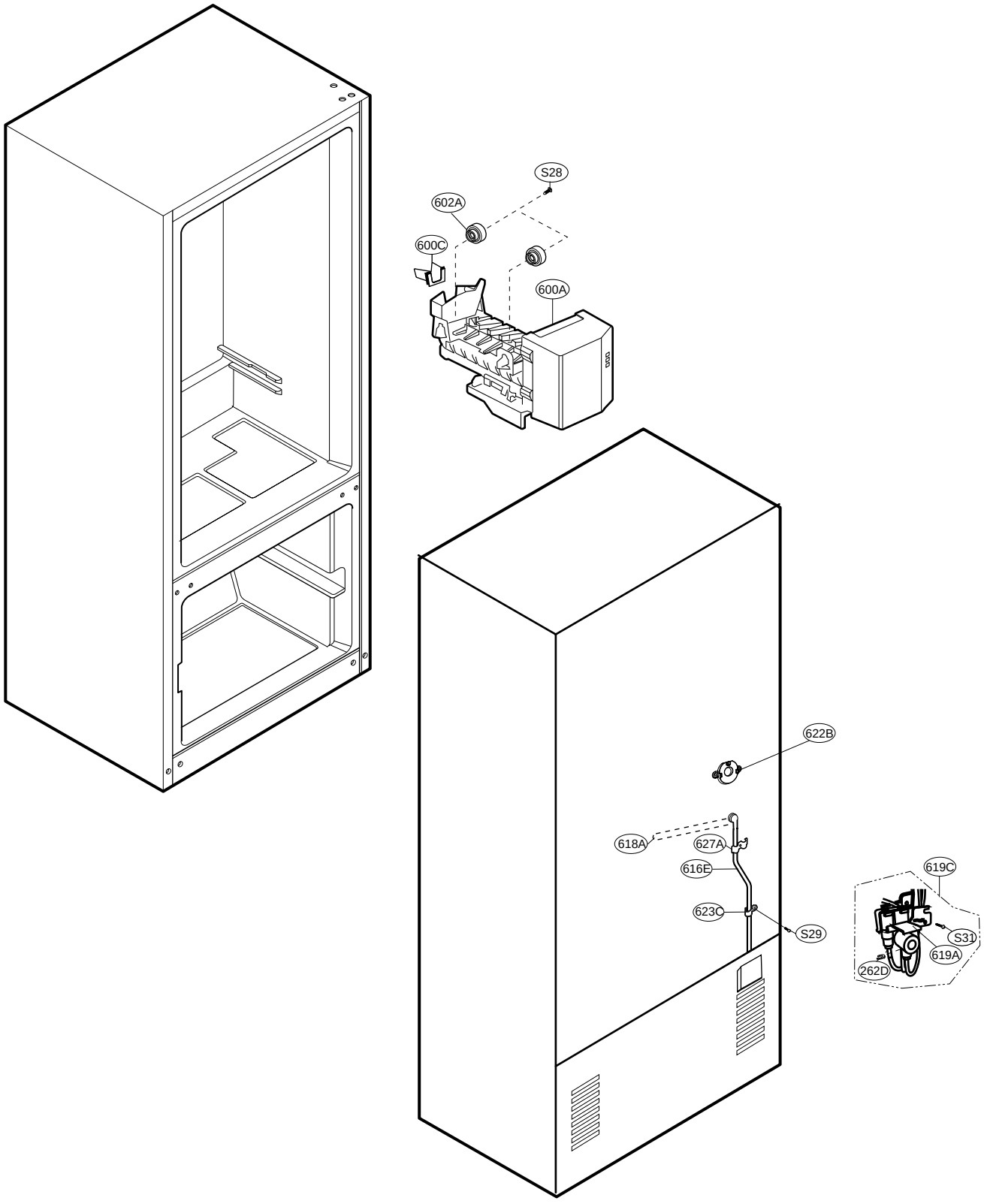
DOOR PARTS

CAUTION: Use the part number to order part, not the position number.



WATER and ICE MAKER PARTS

CAUTION: Use the part number to order part, not the position number.



#EV#

LFC20760SW

Loc No.	Part No.	Description	Loc No.	Part No.	Description
103A	3650JJ2003E	Handle,Rear	271C	4775JJ2018A	Hinge Assembly,Upper
103B	3650JJ2003A	Handle,Rear	281A	3551JJ1018A	Cover Assembly,Hinge
103C	3551JJ1015A	Cover Assembly,Lower	282B	4775JJ2019A	Hinge Assembly,Center
103E	5218JJ3001A	Rail,Slide	282E	3551JJ1018D	Cover Assembly,Hinge
104E	4931JJ3002A	Holder Assembly,Gasket	282F	3806JL2006F	Decor,Duct
105A	5251JA3003B	Tube Assembly,Drain	286A	4984JJ3003A	BUSH
105F	5070JJ3002A	Skirt,Lower	301A	5421JJ1001A	Evaporator Assembly
106A	4779JA2003A	Leg Assembly,Adjust	304A	3551JJ2008A	Cover Assembly,Machinery(Rear)
120B	5209JJ1002A	Duct Assembly,Multi	305B	4580JJ3001A	Roller
125D	4930JJ3007A	Holder,Bracket	305C	4J04238A	Pin,Common
128A	4975JJ2002A	Guide Assembly,Rail	307A	2521JJ8008B	Compressor,Set Assembly
128B	4975JJ2002B	Guide Assembly,Rail	308A	6748JJ8005B	Thermistor,PTC
128E	4930JJ1025B	Holder,Rail	309A	6750JJ8004B	Overload Protect
128F	4930JJ1025A	Holder,Rail	310A	3550JJ8003A	Cover,PTC
131A	5074JJ1055A	BUCKET,ICE	312A	5040JA3031A	Damper,Compressor
135C	3550JJ2030A	Cover,Grille Fan	314A	4620JA3009A	Stopper,Compressor
136A	3391JJ1011A	Tray Assembly,Drawer	315A	3103JJ1001K	Base Assembly,Compressor
136B	3390JJ1095A	Tray,Drawer	317A	5851JJ2002F	Drier Assembly
140B	5027JJ1037B	Shelf Assembly,Refrigerator	318A	4930JA3034A	Holder,Drier
140D	MHL38615403	Shelf,Net	319A	3390JJ0004A	Tray,Drip
140E	MHL38615404	Shelf,Net	319C	MEA41997401	Guide,Fan
142D	5026JJ2001L	Shelf,Net	319E	4810JJ2005A	Bracket,Motor
142E	5026JJ2001M	Shelf,Net	323B	5403JJ1008A	Condenser Assembly,Wire
143E	5027JJ1008L	Shelf Assembly,Refrigerator	327A	5006JA3034A	Cap,Drain Tube
143F	5027JJ1008G	Shelf Assembly,Refrigerator	328A	4J03020A	Damper,Pipe
145A	4930JJ2003A	Holder,Shelf	328B	4J04328A	Damper,Pipe
145B	4930JJ2004A	Holder,Shelf	329A	5901JJ1005A	Fan Assembly
145C	4975JJ2028C	Guide Assembly,Rail	329C	ADP36665702	Fan Assembly
145F	4975JJ2028D	Guide Assembly,Rail	332A	3531JJ1004B	Grille Assembly,Fan
146A	5047JJ1001A	Case,Lower	401A	6615JB2005C	Controller Assembly
151A	3390JJ1032A	Tray,Vegetable	402A	6600JB3007A	Switch,Push Button
151C	4940JJ2003C	KNOB,SHUTTER	404A	4681JK1004A	AC Motor
154A	3550JL2001L	Cover,TV	405A	4811JJ2002A	Bracket Assembly,Motor
155B	4980JJ1016A	SUPPORTER,COVER TV	405B	5040JJ2001A	Damper,Motor Support
158A	3550JJ1040A	Cover,Lamp	405C	5040JA2009B	Damper,Motor Support
158E	MCK30060901	Cover,Lamp	405F	5040JA2004B	Damper,Motor Support
167B	4890JL1002G	Shelf,Glass	405G	4811JJ2002H	Bracket Assembly,Motor
170A	3391JJ2004G	Tray Assembly,Meat	406B	6600JB1004A	Switch,Push Button
200A	3581JJ8720Q	Door Assembly,Freezer	409B	6912JB2004M	Lamp,Incandescent
201A	5433JJ0059Y	Door Foam Assembly,Freezer	409D	3034JJ1002B	Reflector,Lamp
203A	4987JJ1004C	Gasket Assembly,Door	410A	6621JK2002D	Drawing,Assembly
205B	5006JJ2014A	CAP,COVER	410G	0CZZJB2012J	Capacitor,Electric Appliance Film,Box
205C	5006JJ2014B	CAP,COVER	411A	6411JK1006A	Power Cord Assembly
212A	AED37133111	Handle Assembly,Freezer	412D	6877JK2011B	Drawing,Assembly
212G	3846JD1007F	Name Plate	418A	5300JB1100D	Heater,Sheath
212J	4620JJ2010C	STOPPER,HANDLE	420A	4681JB1029J	Motor,DC
230A	ADC33235306	Door Assembly,Refrigerator(Right)	501A	EBR41531301	PCB Assembly,Main
230B	ADC33235207	Door Assembly,Refrigerator(Left)	501F	3551JJ1020A	Cover Assembly,PCB
231A	ADD32184806	Door Foam Assembly,Refrigerator	503C	6871JB2047A	PCB Assembly,Display
231B	ADD32184906	Door Foam Assembly,Refrigerator	503D	3110JJ1005A	Case,Display
233A	4987JJ2003J	Gasket Assembly,Door	503E	3550JJ2031A	Cover,Display
233B	4987JJ2003L	Gasket Assembly,Door	503F	ABQ33905301	Case Assembly,Display
233C	3551JJ2034D	Cover Assembly,Front	503G	3806JL1049A	Decor,Control
233D	3551JJ2034C	Cover Assembly,Front	600A	5989JA0002N	Ice Maker Assembly,Kit
233E	4930JJ2028F	Holder,Gasket	600C	MEA32865501	Guide,Tube
233F	4930JJ2028E	Holder,Gasket	602A	4931JA3005B	Holder Assembly,Bracket
233G	4430JJ2005B	Cam,Shaft	610A	3550JJ2020A	Cover,Sensor
233H	4430JJ2005A	Cam,Shaft	616E	5211JA2003B	Tube Assembly,Inject
237A	4974JJ2017A	Guide,Pitcher	618A	5210JJ3006B	Tube,Inject
237C	4974JJ1021A	Guide,Drawer	619A	5220JA2009D	Valve,Water
241C	5005JJ2022B	Basket Assembly,Door	619B	3550JJ2024A	Cover,Valve
241F	5005JJ2021F	Basket Assembly,Door	619C	AJU55759301	Valve Assembly,Water
243A	4620JJ3006A	Stopper,Door	621B	ACJ30147004	Connector Assembly
243B	4620JJ2009A	Stopper,Door	621C	ACJ30147003	Connector Assembly
244A	AED37082903	Handle Assembly,Refrigerator	622B	MJH36429401	Supporter,Tube Guide
248E	3806JJ1051A	Decor,Tray	623C	4770JA3001A	Band
248F	3806JL2011A	Decor,Tray	627A	4930JA3054A	Holder,Pipe
249A	5098JJ1002B	Connector Assembly	903A	3550JJ0005A	Cover,Lower
249B	5098JJ1002A	Connector Assembly	903B	4930JJ2021A	Holder,Cover(Lower)
249E	5218JA1010E	Rail,Slide	903D	6500JK1003A	Sensor
249F	5218JA1010F	Rail,Slide	903E	6500JK1004A	Sensor
249J	3550JJ1111A	Cover,Connector	S01	1SZZJJ3010A	Screw,Customized
249K	3550JJ1111B	Cover,Connector	S22	J471-00001J	Screw,Customized
250A	4270JJ3001F	Bar	S24	1SZZJA3011B	Screw,Customized
250B	4403JJ3001A	Connector Assembly	S27	4J01424C	Screw,Customized
262D	4004JA3002A	Clip	S28	1SZZJJ3005E	Screw,Customized
262E	4350JA3005B	Ring	S29	4J00415D	Screw,Customized
262H	4775JJ2019B	Hinge Assembly,Center	S31	4000W4A003A	Screw,Customized
271A	4775JJ2018B	Hinge Assembly,Upper	S38	4J00415D	Screw,Customized

#EV#

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Loc No.	Part No.	Description
103A	3650JJ2003H	Handle,Rear
103B	3650JJ2003D	Handle,Rear
103C	3551JJ1015G	Cover Assembly,Lower
103E	5218JJ3001A	Rail,Slide
104E	4931JJ3002A	Holder Assembly,Gasket
105A	5251JA3003B	Tube Assembly,Drain
105F	5070JJ3002A	Skirt,Lower
106A	4779JA2003A	Leg Assembly,Adjust
120B	5209JJ1002A	Duct Assembly,Multi
125D	4930JJ3007A	Holder,Bracket
128A	4975JJ2002A	Guide Assembly,Rail
128B	4975JJ2002B	Guide Assembly,Rail
128E	4930JJ1025B	Holder,Rail
128F	4930JJ1025A	Holder,Rail
131A	5074JJ1055A	BUCKET,ICE
135C	3550JJ2030A	Cover,Grille Fan
136A	3391JJ1011A	Tray Assembly,Drawer
136B	3390JJ1095A	Tray,Drawer
140B	5027JJ1037B	Shelf Assembly,Refrigerator
140D	MHL38615403	Shelf,Net
140E	MHL38615404	Shelf,Net
142D	5026JJ2001L	Shelf,Net
142E	5026JJ2001M	Shelf,Net
143E	5027JJ1008L	Shelf Assembly,Refrigerator
143F	5027JJ1008G	Shelf Assembly,Refrigerator
145A	4930JJ2003A	Holder,Shelf
145B	4930JJ2004A	Holder,Shelf
145C	4975JJ2028C	Guide Assembly,Rail
145F	4975JJ2028D	Guide Assembly,Rail
146A	5047JJ1001A	Case,Lower
151A	3390JJ1032A	Tray,Vegetable
151C	4940JJ2003C	KNOB,SHUTTER
154A	3550JL2001L	Cover,TV
155B	4980JJ1016A	SUPPORTER,COVER TV
158A	3550JJ1040A	Cover,Lamp
158E	MCK30060901	Cover,Lamp
167B	4890JL1002G	Shelf,Glass
170A	3391JJ2004G	Tray Assembly,Meat
200A	3581JJ8720P	Door Assembly,Freezer
201A	5433JJ0059W	Door Foam Assembly,Freezer
203A	ADX52752601	Gasket Assembly,Door
205B	5006JJ2014A	CAP,COVER
205C	5006JJ2014B	CAP,COVER
212A	AED37133109	Handle Assembly,Freezer
212G	3846JD1007H	Name Plate
212J	4620JJ2010C	STOPPER,HANDLE
230A	ADC33235308	Door Assembly,Refrigerator(Right)
230B	ADC33235205	Door Assembly,Refrigerator(Left)
231A	ADD32184805	Door Foam Assembly,Refrigerator
231B	ADD32184905	Door Foam Assembly,Refrigerator
233A	4987JJ2003Q	Gasket Assembly,Door
233B	4987JJ2003R	Gasket Assembly,Door
233C	3551JJ2034D	Cover Assembly,Front
233D	3551JJ2034C	Cover Assembly,Front
233E	4930JJ2028F	Holder,Gasket
233F	4930JJ2028E	Holder,Gasket
233G	4430JJ2005B	Cam,Shaft
233H	4430JJ2005A	Cam,Shaft
237A	4974JJ2017A	Guide,Pitcher
237C	4974JJ1021A	Guide,Drawer
241C	5005JJ2022B	Basket Assembly,Door
241F	5005JJ2021F	Basket Assembly,Door
243A	4620JJ3006D	Stopper,Door
243B	4620JJ2009A	Stopper,Door
244A	AED37082901	Handle Assembly,Refrigerator
248E	3806JJ1051A	Decor,Tray
248F	3806JL2011A	Decor,Tray
249A	5098JJ1002B	Connector Assembly
249B	5098JJ1002A	Connector Assembly
249E	5218JA1010E	Rail,Slide
249F	5218JA1010F	Rail,Slide
249J	3550JJ1111A	Cover,Connector
249K	3550JJ1111B	Cover,Connector
250A	4270JJ3001F	Bar
250B	4403JJ3001A	Connector Assembly
262D	4004JA3002A	Clip
262E	4350JA3005B	Ring
262H	4775JJ2019F	Hinge Assembly,Center
271A	4775JJ2018B	Hinge Assembly,Upper
271C	4775JJ2018A	Hinge Assembly,Upper
281A	3551JJ1018C	Cover Assembly,Hinge
282B	4775JJ2019E	Hinge Assembly,Center
282E	3551JJ1018F	Cover Assembly,Hinge
282F	3806JL2006F	Decor,Duct
286A	4984JJ3003A	BUSH
301A	5421JJ1001A	Evaporator Assembly
304A	3551JJ2008A	Cover Assembly,Machinery(Rear)
305B	4580JJ3001A	Roller
305C	4J04238A	Pin,Common
307A	2521JJ8008B	Compressor,Set Assembly
308A	6748JJ8005B	Thermistor,PTC
309A	6750JJ8004B	Overload Protect
310A	3550JJ8003A	Cover,PTC
312A	5040JA3031A	Damper,Compressor
314A	4620JA3009A	Stopper,Compressor
315A	3103JJ1001K	Base Assembly,Compressor
317A	5851JJ2002F	Drier Assembly
318A	4930JA3034A	Holder,Drier
319A	3390JJ0004A	Tray,Drip
319C	MEA41997401	Guide,Fan
319E	4810JJ2005A	Bracket,Motor
323B	5403JJ1008A	Condenser Assembly,Wire
327A	5006JA3034A	Cap,Drain Tube
328A	4J03020A	Damper,Pipe
328B	4J04328A	Damper,Pipe
329A	5901JJ1005A	Fan Assembly
329C	ADP36665702	Fan Assembly
332A	3531JJ1004B	Grille Assembly,Fan
401A	6615JB2005C	Controller Assembly
402A	6600JB3007B	Switch,Push Button
404A	4681JK1004A	AC Motor
405A	4811JJ2002A	Bracket Assembly,Motor
405B	5040JJ2001A	Damper,Motor Support
405C	5040JA2009B	Damper,Motor Support
405F	5040JA2004B	Damper,Motor Support
405G	4811JJ2002H	Bracket Assembly,Motor
406B	6600JB1004A	Switch,Push Button
409B	6912JB2004M	Lamp,Incandescent
409D	3034JJ1002B	Reflector,Lamp
410A	6621JK2002D	Drawing,Assembly
410G	0CZZJB2012J	Capacitor,Electric Appliance Film,Box
411A	6411JK1006A	Power Cord Assembly
412D	6877JK2011B	Drawing,Assembly
418A	5300JB1100D	Heater,Sheath
420A	4681JB1029J	Motor,DC
501A	EBR41531301	PCB Assembly,Main
501F	3551JJ1020A	Cover Assembly,PCB
503C	6871JB2047A	PCB Assembly,Display
503D	3110JJ1005A	Case,Display
503E	3550JJ2031A	Cover,Display
503F	ABQ33905301	Case Assembly,Display
503G	3806JL1049A	Decor,Control
600A	5989JA0002N	Ice Maker Assembly,Kit
600C	MEA32865501	Guide,Tube
602A	4931JA3005B	Holder Assembly,Bracket
610A	3550JJ2020A	Cover,Sensor
616E	5211JA2003B	Tube Assembly,Inject
618A	5210JJ3006B	Tube,Inject
619A	5220JA2009D	Valve,Water
619B	3550JJ2024A	Cover,Valve
619C	AJU55759301	Valve Assembly,Water
621B	ACJ30147004	Connector Assembly
621C	ACJ30147003	Connector Assembly
622B	MJH36429401	Supporter,Tube Guide
623C	4770JA3001A	Band
627A	4930JA3054A	Holder,Pipe
903A	3550JJ0005D	Cover,Lower
903B	4930JJ2021A	Holder,Cover(Lower)
903D	6500JK1003A	Sensor
903E	6500JK1004A	Sensor
S01	1SZZJJ3010A	Screw,Customized
S22	J471-00001J	Screw,Customized
S24	1SZZJA3011B	Screw,Customized
S27	4J01424C	Screw,Customized
S28	1SZZJJ3005E	Screw,Customized
S29	4J00415D	Screw,Customized
S31	4000W4A003A	Screw,Customized
S38	4J00415D	Screw,Customized

#EV#

LFC20760SB

Loc No.	Part No.	Description	Loc No.	Part No.	Description
103A	3650JJ2003M	Handle,Rear	271C	4775JJ2018A	Hinge Assembly,Upper
103B	3650JJ2003L	Handle,Rear	281A	3551JJ1018B	Cover Assembly,Hinge
103C	3551JJ1015E	Cover Assembly,Lower	282B	4775JJ2019C	Hinge Assembly,Center
103E	5218JJ3001A	Rail,Slide	282E	3551JJ1018E	Cover Assembly,Hinge
104E	4931JJ3002A	Holder Assembly,Gasket	282F	3806JL2006F	Decor,Duct
105A	5251JA3003B	Tube Assembly,Drain	286A	4984JJ3003A	BUSH
105F	5070JJ3002A	Skirt,Lower	301A	5421JJ1001A	Evaporator Assembly
106A	4779JA2003A	Leg Assembly,Adjust	304A	3551JJ2008A	Cover Assembly,Machinery(Rear)
120B	5209JJ1002A	Duct Assembly,Multi	305B	4580JJ3001A	Roller
125D	4930JJ3007A	Holder,Bracket	305C	4J04238A	Pin,Common
128A	4975JJ2002A	Guide Assembly,Rail	307A	2521JJ8008B	Compressor,Set Assembly
128B	4975JJ2002B	Guide Assembly,Rail	308A	6748JJ8005B	Thermistor,PTC
128E	4930JJ1025B	Holder,Rail	309A	6750JJ8004B	Overload Protect
128F	4930JJ1025A	Holder,Rail	310A	3550JJ8003A	Cover,PTC
131A	5074JJ1055A	BUCKET,ICE	312A	5040JA3031A	Damper,Compressor
135C	3550JJ2030A	Cover,Grille Fan	314A	4620JA3009A	Stopper,Compressor
136A	3391JJ1011A	Tray Assembly,Drawer	315A	3103JJ1001K	Base Assembly,Compressor
136B	3390JJ1095A	Tray,Drawer	317A	5851JJ2002F	Drier Assembly
140B	5027JJ1037B	Shelf Assembly,Refrigerator	318A	4930JA3034A	Holder,Drier
140D	MHL38615403	Shelf,Net	319A	3390JJ0004A	Tray,Drip
140E	MHL38615404	Shelf,Net	319C	MEA41997401	Guide,Fan
142D	5026JJ2001L	Shelf,Net	319E	4810JJ2005A	Bracket,Motor
142E	5026JJ2001M	Shelf,Net	323B	5403JJ1008A	Condenser Assembly,Wire
143E	5027JJ1008L	Shelf Assembly,Refrigerator	327A	5006JA3034A	Cap,Drain Tube
143F	5027JJ1008G	Shelf Assembly,Refrigerator	328A	4J03020A	Damper,Pipe
145A	4930JJ2003A	Holder,Shelf	328B	4J04328A	Damper,Pipe
145B	4930JJ2004A	Holder,Shelf	329A	5901JJ1005A	Fan Assembly
145C	4975JJ2028C	Guide Assembly,Rail	329C	ADP36665702	Fan Assembly
145F	4975JJ2028D	Guide Assembly,Rail	332A	3531JJ1004B	Grille Assembly,Fan
146A	5047JJ1001A	Case,Lower	401A	6615JB2005C	Controller Assembly
151A	3390JJ1032A	Tray,Vegetable	402A	6600JB3007E	Switch,Push Button
151C	4940JJ2003C	KNOB,SHUTTER	404A	4681JK1004A	AC Motor
154A	3550JL2001L	Cover,TV	405A	4811JJ2002A	Bracket Assembly,Motor
155B	4980JJ1016A	SUPPORTER,COVER TV	405B	5040JJ2001A	Damper,Motor Support
158A	3550JJ1040A	Cover,Lamp	405C	5040JA2009B	Damper,Motor Support
158E	MCK30060901	Cover,Lamp	405F	5040JA2004B	Damper,Motor Support
167B	4890JL1002G	Shelf,Glass	405G	4811JJ2002H	Bracket Assembly,Motor
170A	3391JJ2004G	Tray Assembly,Meat	406B	6600JB1004A	Switch,Push Button
200A	3581JJ8720R	Door Assembly,Freezer	409B	6912JB2004M	Lamp,Incandescent
201A	5433JJ0059X	Door Foam Assembly,Freezer	409D	3034JJ1002B	Reflector,Lamp
203A	4987JJ1004G	Gasket Assembly,Door	410A	6621JK2002D	Drawing,Assembly
205B	5006JJ2014A	CAP,COVER	410G	0CZZJB2012J	Capacitor,Electric Appliance Film,Box
205C	5006JJ2014B	CAP,COVER	411A	6411JK1006A	Power Cord Assembly
212A	AED37133110	Handle Assembly,Freezer	412D	6877JK2011B	Drawing,Assembly
212G	3846JD1007G	Name Plate	418A	5300JB1100D	Heater,Sheath
212J	4620JJ2010C	STOPPER,HANDLE	420A	4681JB1029J	Motor,DC
230A	ADC33235307	Door Assembly,Refrigerator(Right)	501A	EBR41531301	PCB Assembly,Main
230B	ADC33235208	Door Assembly,Refrigerator(Left)	501F	3551JJ1020A	Cover Assembly,PCB
231A	ADD32184807	Door Foam Assembly,Refrigerator	503C	6871JB2047A	PCB Assembly,Display
231B	ADD32184907	Door Foam Assembly,Refrigerator	503D	3110JJ1005A	Case,Display
233A	4987JJ2003K	Gasket Assembly,Door	503E	3550JJ2031A	Cover,Display
233B	4987JJ2003M	Gasket Assembly,Door	503F	ABQ33905301	Case Assembly,Display
233C	3551JJ2034D	Cover Assembly,Front	503G	3806JL1049A	Decor,Control
233D	3551JJ2034C	Cover Assembly,Front	600A	5989JA0002N	Ice Maker Assembly,Kit
233E	4930JJ2028F	Holder,Gasket	600C	MEA32865501	Guide,Tube
233F	4930JJ2028E	Holder,Gasket	602A	4931JA3005B	Holder Assembly,Bracket
233G	4430JJ2005B	Cam,Shaft	610A	3550JJ2020A	Cover,Sensor
233H	4430JJ2005A	Cam,Shaft	616E	5211JA2003B	Tube Assembly,Inject
237A	4974JJ2017A	Guide,Pitcher	618A	5210JJ3006B	Tube,Inject
237C	4974JJ1021A	Guide,Drawer	619A	5220JA2009D	Valve,Water
241C	5005JJ2022B	Basket Assembly,Door	619B	3550JJ2024A	Cover,Valve
241F	5005JJ2021F	Basket Assembly,Door	619C	AJU55759301	Valve Assembly,Water
243A	4620JJ3006C	Stopper,Door	621B	ACJ30147004	Connector Assembly
243B	4620JJ2009A	Stopper,Door	621C	ACJ30147003	Connector Assembly
244A	AED37082902	Handle Assembly,Refrigerator	622B	MJH36429401	Supporter,Tube Guide
248E	3806JJ1051A	Decor,Tray	623C	4770JA3001A	Band
248F	3806JL2011A	Decor,Tray	627A	4930JA3054A	Holder,Pipe
249A	5098JJ1002B	Connector Assembly	903A	3550JJ0005C	Cover,Lower
249B	5098JJ1002A	Connector Assembly	903B	4930JJ2021A	Holder,Cover(Lower)
249E	5218JA1010E	Rail,Slide	903D	6500JK1003A	Sensor
249F	5218JA1010F	Rail,Slide	903E	6500JK1004A	Sensor
249J	3550JJ1111A	Cover,Connector	S01	1SZZJJ3010A	Screw,Customized
249K	3550JJ1111B	Cover,Connector	S22	J471-00001J	Screw,Customized
250A	4270JJ3001F	Bar	S24	1SZZJA3011B	Screw,Customized
250B	4403JJ3001A	Connector Assembly	S27	4J01424C	Screw,Customized
262D	4004JA3002A	Clip	S28	1SZZJJ3005E	Screw,Customized
262E	4350JA3005B	Ring	S29	4J00415D	Screw,Customized
262H	4775JJ2019D	Hinge Assembly,Center	S31	4000W4A003A	Screw,Customized
271A	4775JJ2018B	Hinge Assembly,Upper	S38	4J00415D	Screw,Customized

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