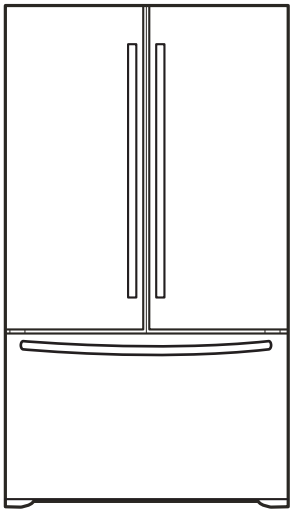
LG

REFRIGERATOR

SERVICE MANUAL

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



MODELS:
LFC20760SW /04
LFC20760SB /04
LFC20760ST /04

ECN (Engineering Change Number)

Rev.01
SVC Improvement opening door freezer (change design of rails)

Rev.02
Change Cover Lower, Case PCB and Rail

Rev.03
Change compressor & base compressor

Rev.04
Valve inclined in order to improve water house connection

CONTENTS

⚠ SAFETY PRECAUTIONS

Please read the following instructions before servicing your refrigerator.

1.Check the refrigerator for current leakage.

2.To preven telectric 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.

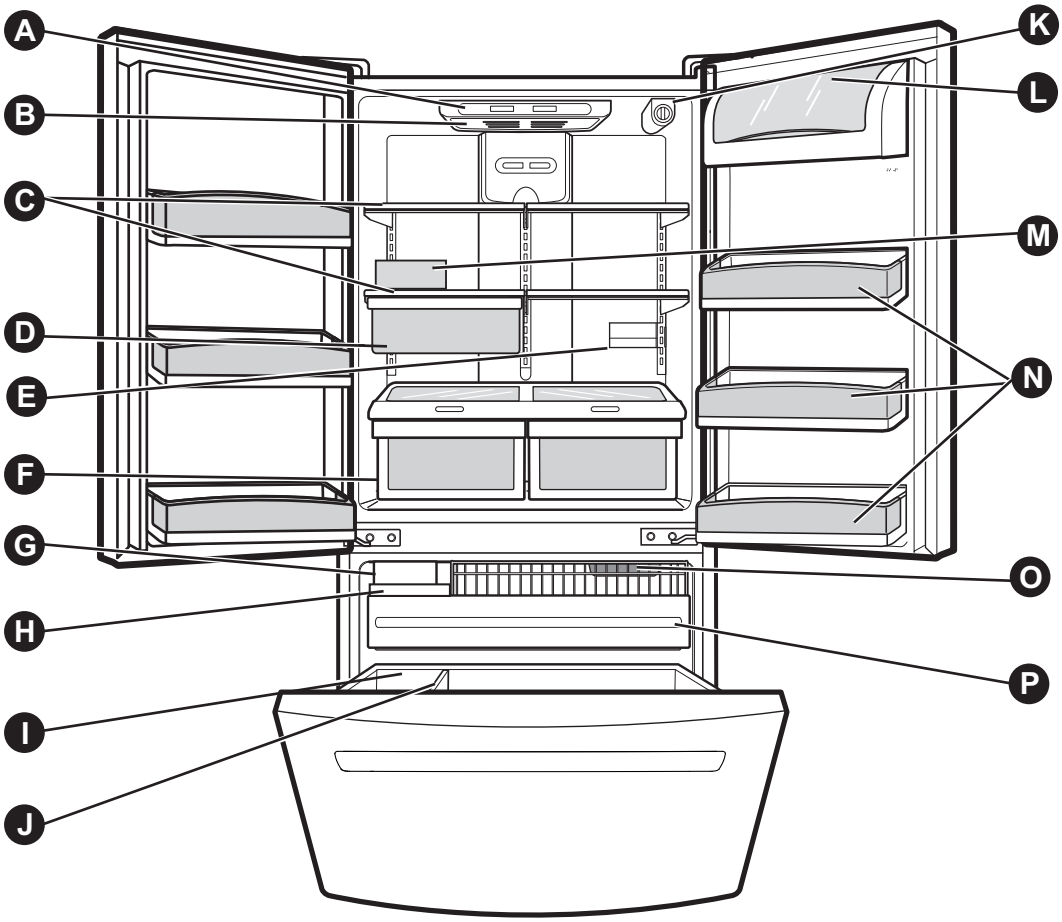
8.When servicing the evaporator,wear gloves to prevent Injuries from the sharp evaporator fins.

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	LFC20760SW	LFC20760SB	LFC20760ST
GENERAL FEATURES	Color	Super White	Black	Stainless
	Dimensions	29.8 (W) x 32.2 (D) x 68.4 (H) in		
	Net Weight	111 Kg		
	Capacity	20 cuft		
	Refrigerant	R134a		
	Climate class	Temperatel (T)		
	Rated Rating	115V~ / 60Hz		
	Cooling System	Fan Cooling		
	Temperature Control	MICOM control		
	Defrosting System	Full Automatic		
		Heater Defrost		
	Insulation	Cyclo, Pentane		
	Compressor	MC57LAUM PTC Starting Type		
	Evaporator	Fin Tube Type		
	Condenser	Wire Condenser		
	Lubricanting Oil	Polyol Ester ISO 10 220 ± 10 cc		
	Drier	MOLECULAR SIEVE XH-7		
	Capillary Tube	ID Ø0.75		
	First Defrost	4 Hours		
	Defrost Cycle	7 - 40 Hours		
	Desfrosting Device	Heater, Sheath		
	Anti-freezing Heater	Water Tank Heater		
REFRIGERATOR	Case Material	Embo (normal)		
	Door Material	PCM	VCM	Stainless
	Handle Type	Vista		
	Display Graphic	ICE PLUS		
	Basket, Quantity	3 left + 3 right		
	Ice Tray & Bank	1B/(1EA)		
	Tray Drawer-F/L	Yes (Plastic)		
	Lamp	Yes (2) 40W/Blue		
	Shelf	4 fix		
	Tray meat	Yes		
	Egg Bank	No		
FREEZER	Basket, Quantity	No		
	Lamp	Yes (1) 40W/Blue		
	Tray Drawer-F/L	Yes (Plastic)		
	Tray Drawer-F/U	Yes (Full Width)		

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** Custom cube 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

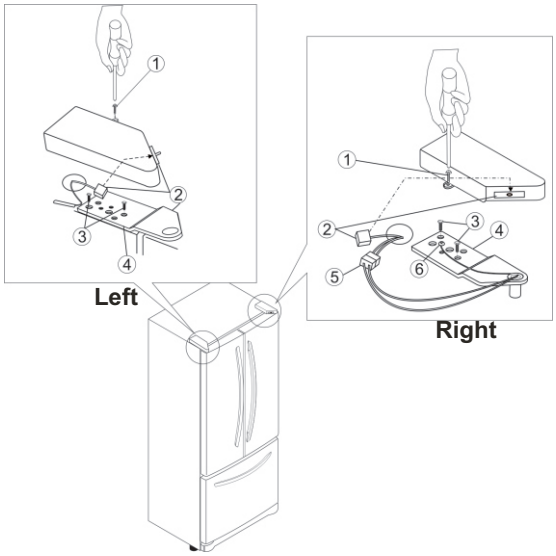
3-1 REMOVING REFRIGERATOR DOOR

► 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

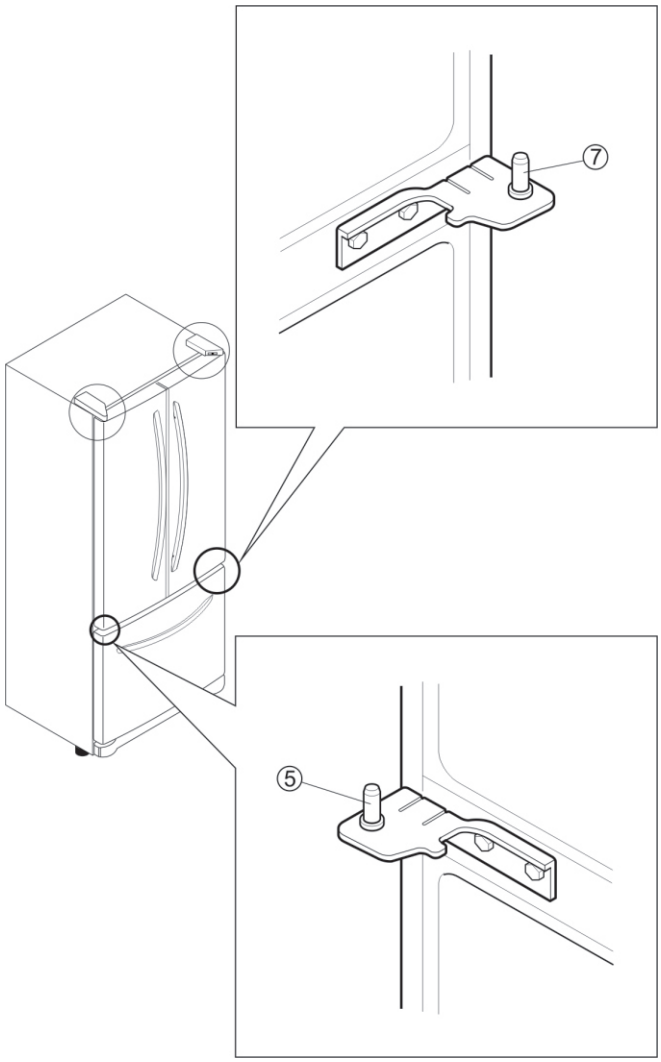
- Loosen the cover screw (1).
- Disconnect door switch wire (2).
- Disconnect wire harness (5).
- Loosen hinge bolts (3).
- Loosen ground screw (6).
- Lift off the top hinge (4).
- Place the door on a non-scratching surface with the inside up.



► Left Door

- Lower the door onto the middle hinge pin (5).
- Make sure the door is aligned with the cabinet.
- Replace the top hinge (4) installing hinge screws (3) to secure it.
- Make sure the gasket on the door is flush against the cabinet and is not folded.
- Support the door on the handle side while securing. And make sure the door is straight and the gap between the doors is even across the front.
- Connect the door switch wire (2).
- Tighten the cover screw (1).

Note: To use like reference the previous image.



3-2 REPLACING REFRIGERATOR DOOR

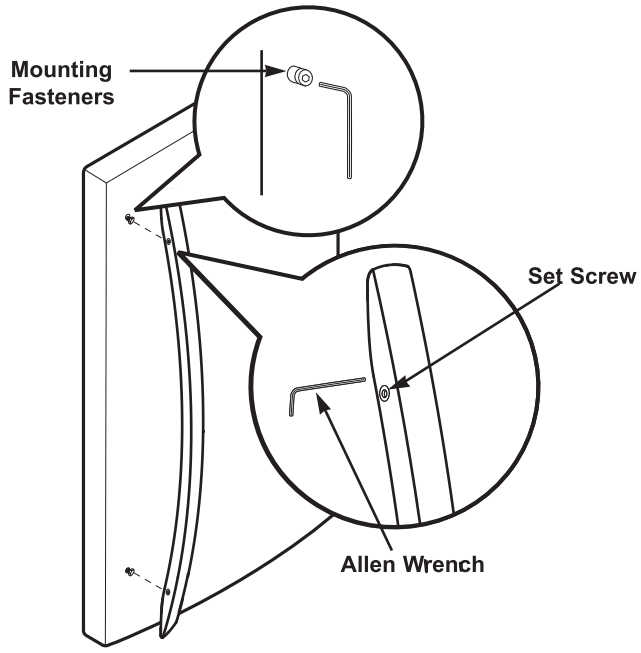
► Right Door

- Lower the door onto the middle hinge pin (7).
- Make sure the door is aligned with the cabinet.
- Replace the top hinge (4) installing hinge screws (3) to secure it.
- Make sure the gasket on the door is flush against the cabinet and is not folded.
- Support the door on the handle side while securing. And make sure the door is straight and the gap between the doors is even across the front.
- Install the ground screw (6).
- Connect the door switch wire (2).
- Tighten the cover screw (1).

3-3 REMOVE DOOR HANDLE

1. Removing Refrigerator Handle

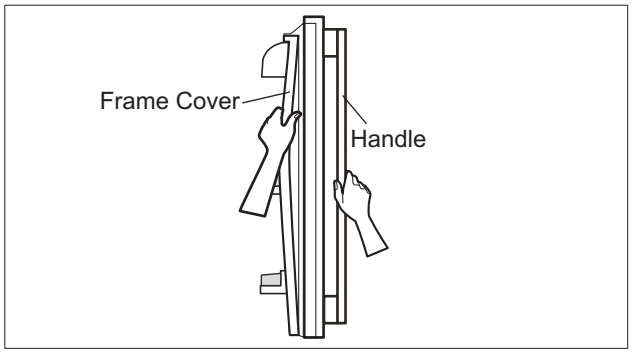
- Loosen the set screws with the 3/32” allen wrench and remove the handle.
  NOTE: If the handle mounting fasteners need to be tightened or removes, use a 1/4” allen wrench.



3-4 DOOR GASKET REMOVAL

1. Remove door frame cover

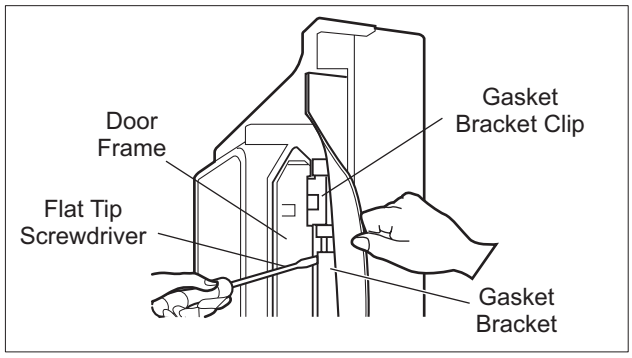
Starting at top of cover and working down, snap cover out and away from door.



2. Remove gasket bracket clips

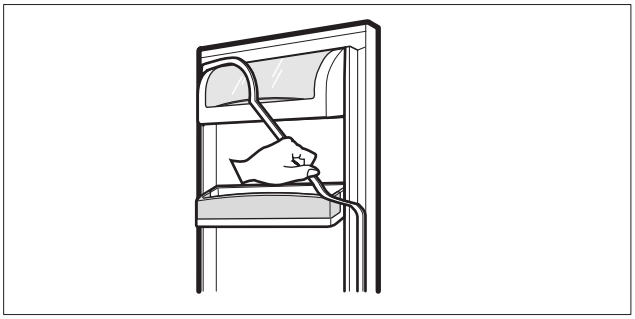
There are two clips on each door. Start bracket removal near one of the middle clips.

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.



3. Remove gasket

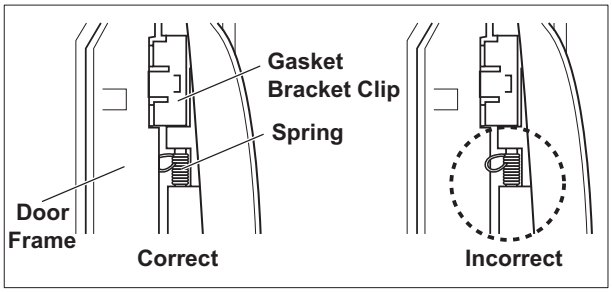
Pull gasket free from gasket channel on the three remaining sides of door.



3-5 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.



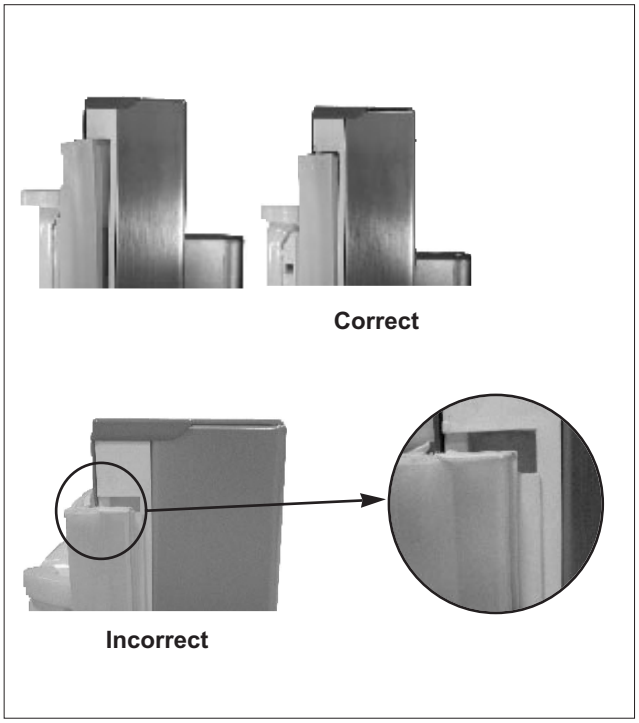
4) Push in remaining two clips until you hear each snap securely into place.

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

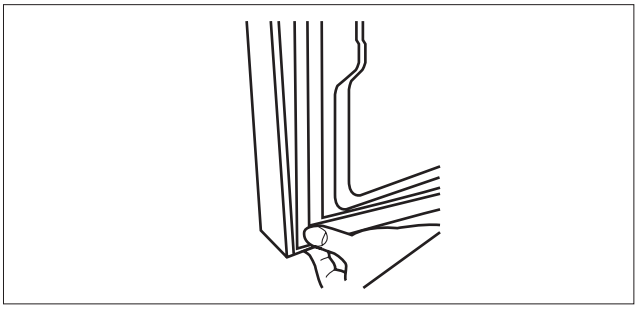
2. Insert gasket into channel

1) Snap gasket assembly into the door bracket.

<Inserting the Gasket Assembly into the Bracket Door>

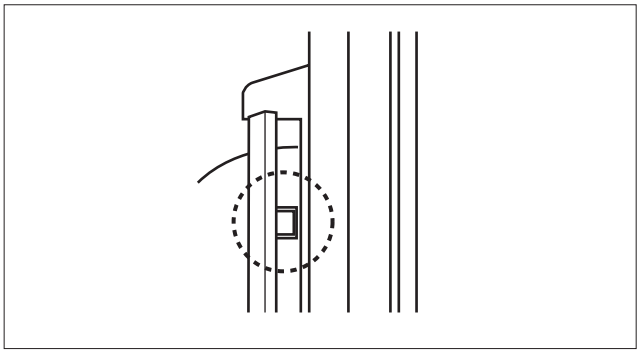


2) Press gasket into channels on the three remaining sides of door.



3) Replace door frame cover

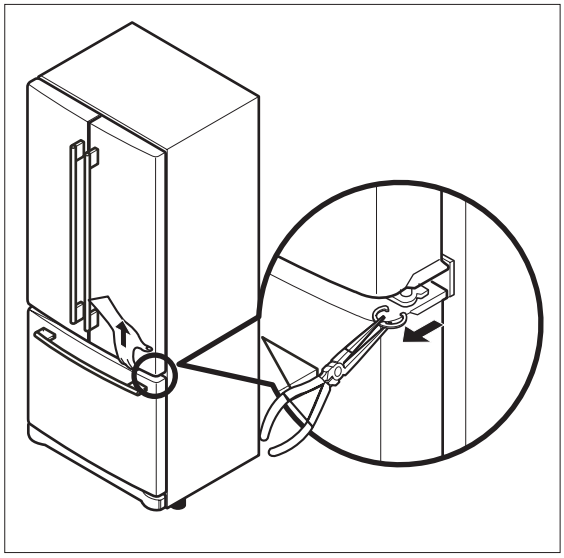
Starting at top of cover and working down, snap cover back into door.



3-6 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.)

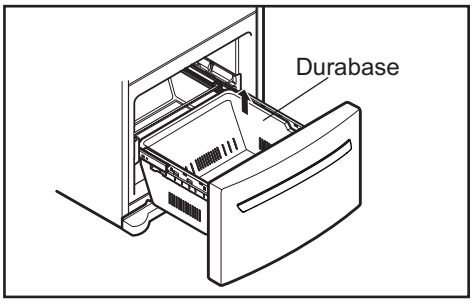


3-7 PULL OUT DRAWER

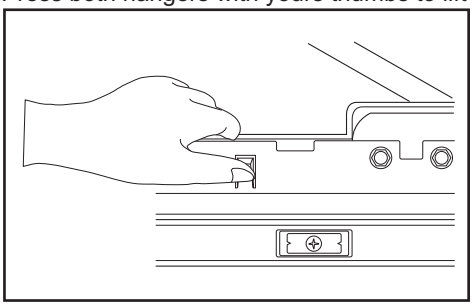
(a) HOW TO REMOVE PULL OUT DRAWER

IMPORTANT: To avoid possible injury, product or property damage, you will need two people to perform the following instructions.

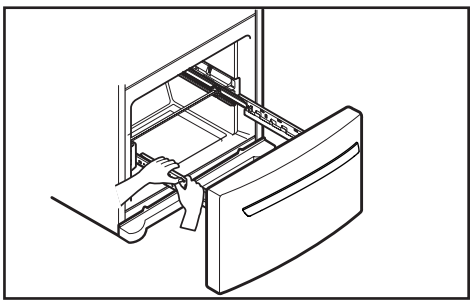
- Pull the drawer open to full lower extension. Remove durabase by lifting it from rail system.



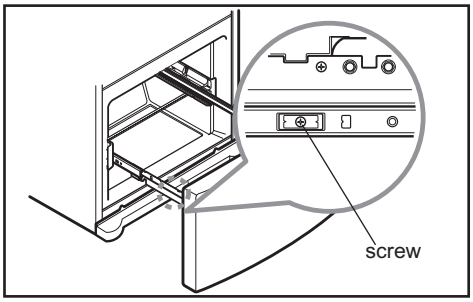
- Press both hangers with yours thumbs to lift it up.



- Separate the left and right rail cover



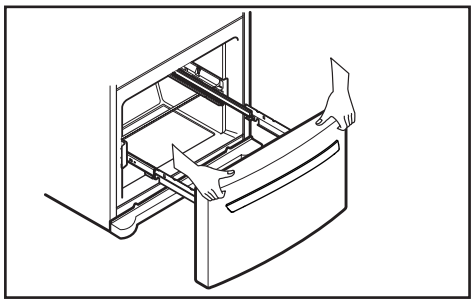
- Remove the screws of the rail on both sides.

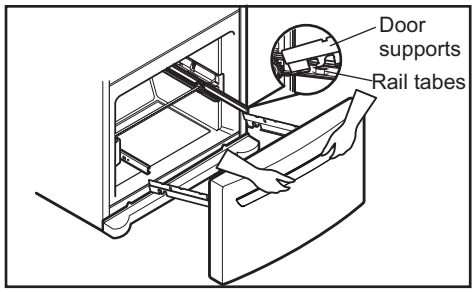


⚠ **CAUTION:** When removing drawer door, do not hold it by the handle. Door could fall down and you may be injured grasp door with both hands as pictured below When removing.

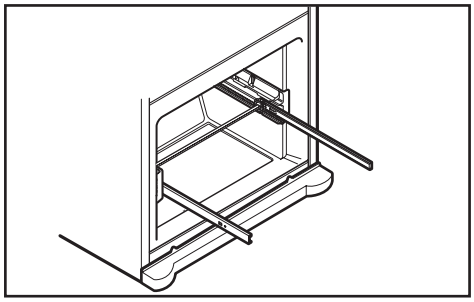
⚠ **CAUTION:** When laying down the drawer, be careful not to damage the floor or hurt your feet with the sharp edges on hinge side.

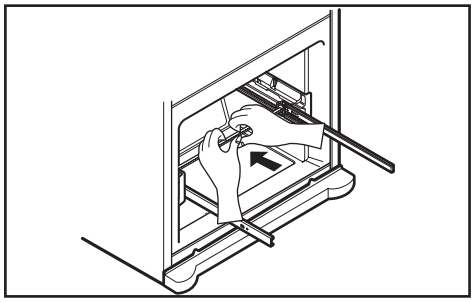
- With both hands, hold both sides of the door and pull it up to separate it from the rails.





- Push rails back into drawe cavity. With both hands, hold the center of the bar and push it in so that both rails go back simultaneously.

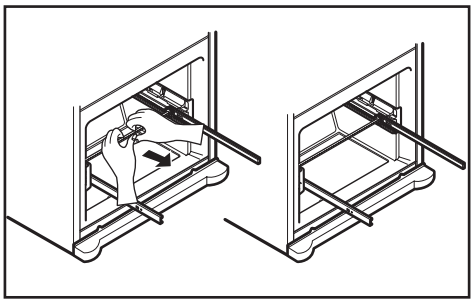




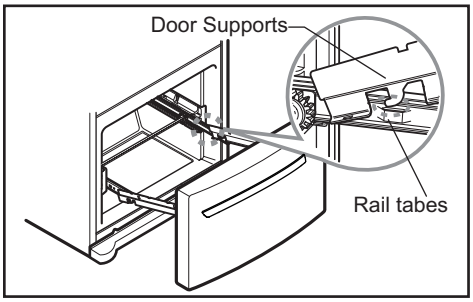
(b) HOW TO INSTALL PULL OUT DRAWER

IMPORTANT: To avoid possible injury, product or property damage, you will need two people to perform the following instructions.

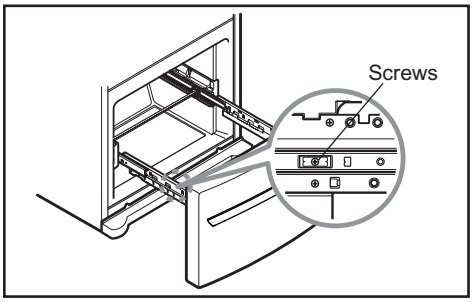
- With both hands, hold the center of the bar and pull it out to let both rails out to full extension simultaneously.



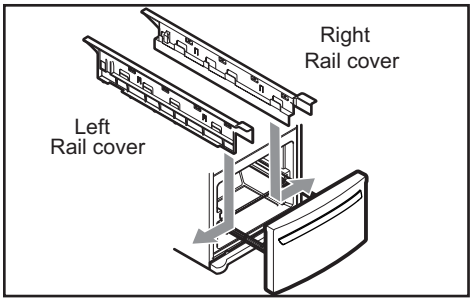
- Hook door supports into rail tabs.



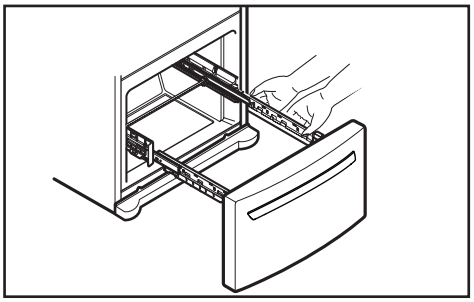
- Lower door into final position and tighten the screws.



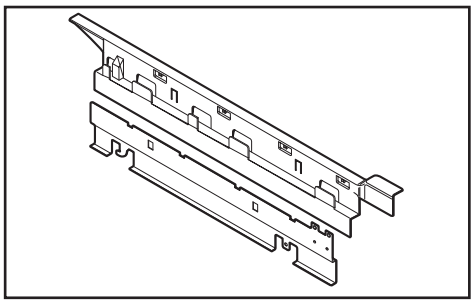
- Make sure you have a right rail cover for each side.

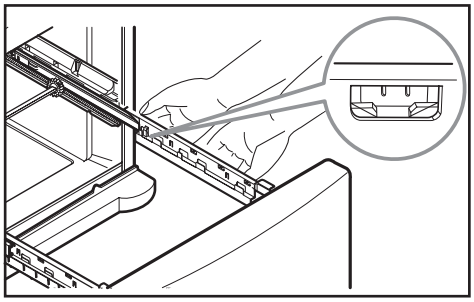


- Align the top holes of the rail cover with the top holes of the door supports to assemble the rail cover.

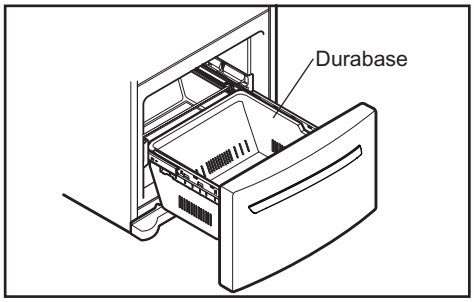


- Verify the hole's assembly





- With the rails pulled out to full extension, insert the durabase in the rail assembly.

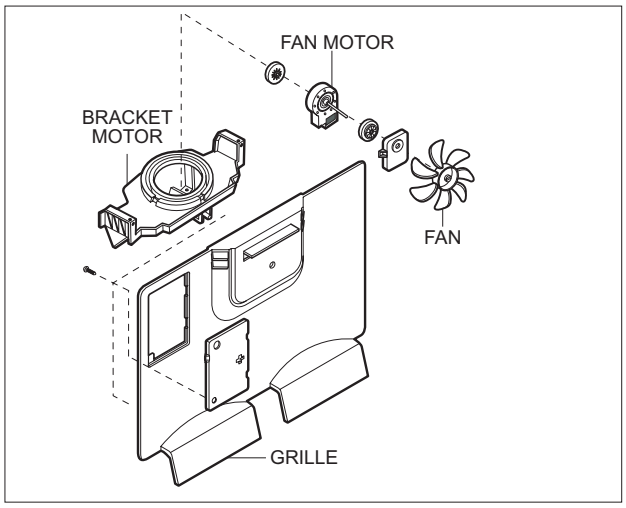


⚠ **WARNING:** To prevent accidental child and pet entrapment or suffocation risk. DO NOT allow them to play inside of drawer.

⚠ **WARNING:** DO NOT step or sit down on Freezer Door.

3-8 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.



3-9 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 1)
2. Separate the connector with the Defrost Control assembly and replace the Defrost Control assembly after cutting the Tie Wrap. (Figure 2)

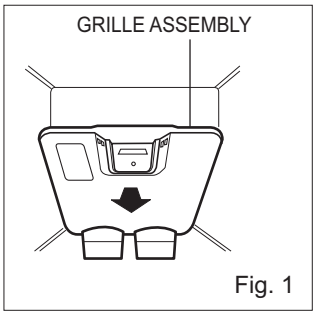


Fig. 1

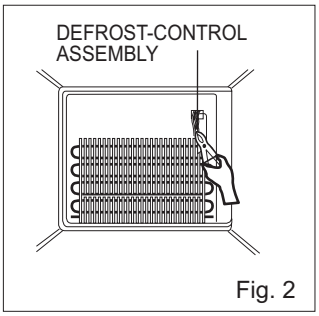
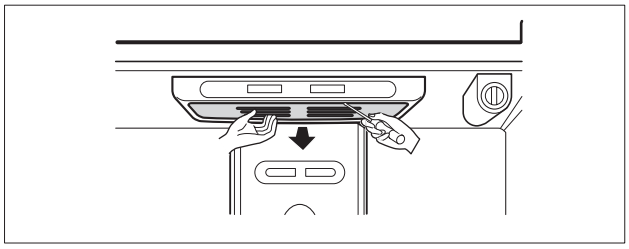


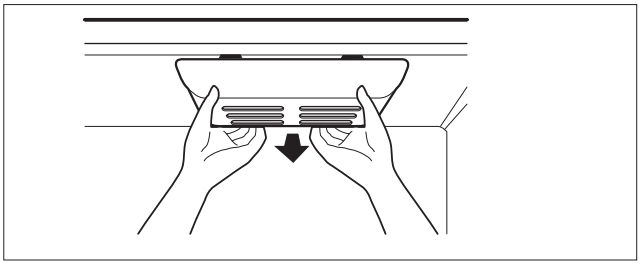
Fig. 2

3-10 LAMP



3-10-1 Refrigerator Compartment Lamp

1. Unplug the power cord from the outlet.
2. Remove refrigerator shelves.
3. Release the hooks on both ends of the lamp shield and pull the shield downward to remove it.
4. Turn the lamp counterclockwise.
5. Assembly is the reverse of disassembly. Replacement bulb must be the same specification as the original (Max. 40 W2EA).

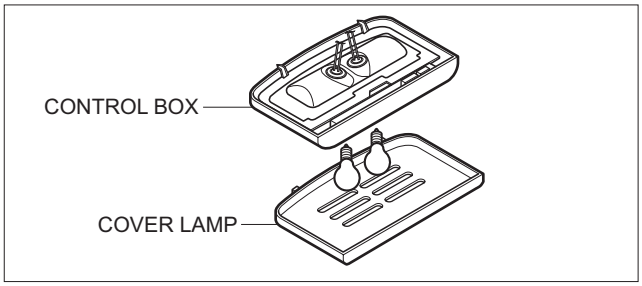


3-10-2 Freezer Compartment Lamp

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.

3-11 CONTROL BOX-REFRIGERATOR

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



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

3-12 MULTI DUCT

1. Remove the upper and lower Caps by using a flat screwdriver, and remove 2 screws. (Fig. 3)
2. Disconnect the lead wire on the bottom position.

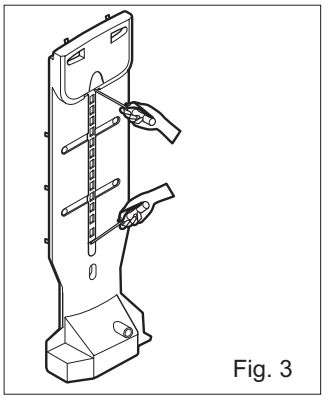


Fig. 3

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

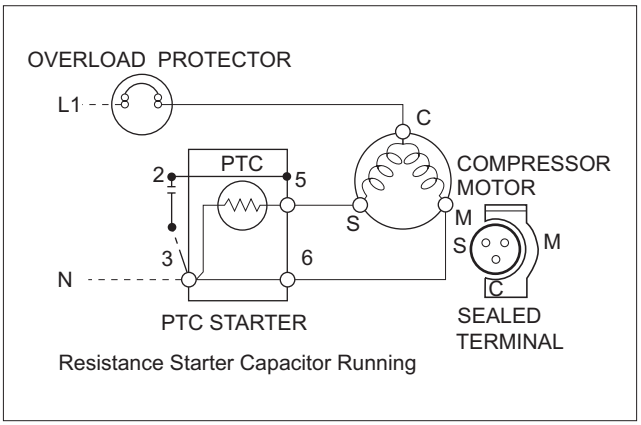
(1) PTC (Positive Temperature Coefficient) is a no-contact semiconductor starting device which uses ceramic material consisting of $BaTiO_3$.
(2) The higher the temperature is, the higher the resistance value. These features are used as a starting device for the Motor.

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



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.

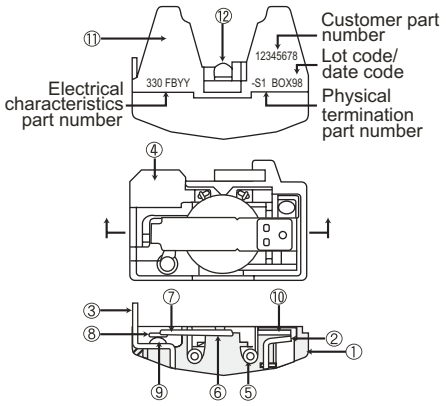
(2) When high current flows to the Compressor motor, the Bimetal works by heating the heater inside the OLP, and the OLP protects the Motor by cutting off the current flowing to the Compressor Motor.

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.

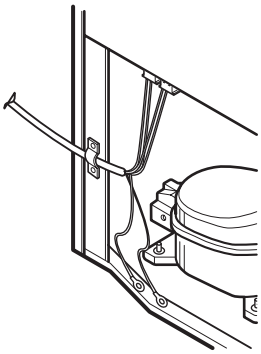
(2) For normal operation of the OLP, do not turn the Adjust Screw of the OLP in any way.

(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)

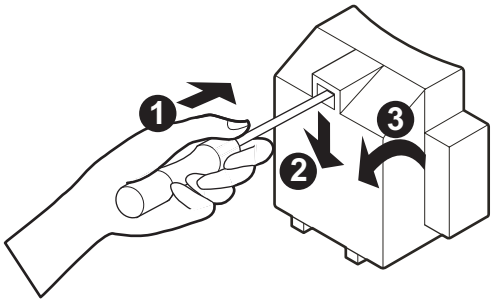
4-4 TO REMOVE THE COVER PTC



1) Remove the Cover Back M/C.

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

(3) Loosen two screws on comp base.

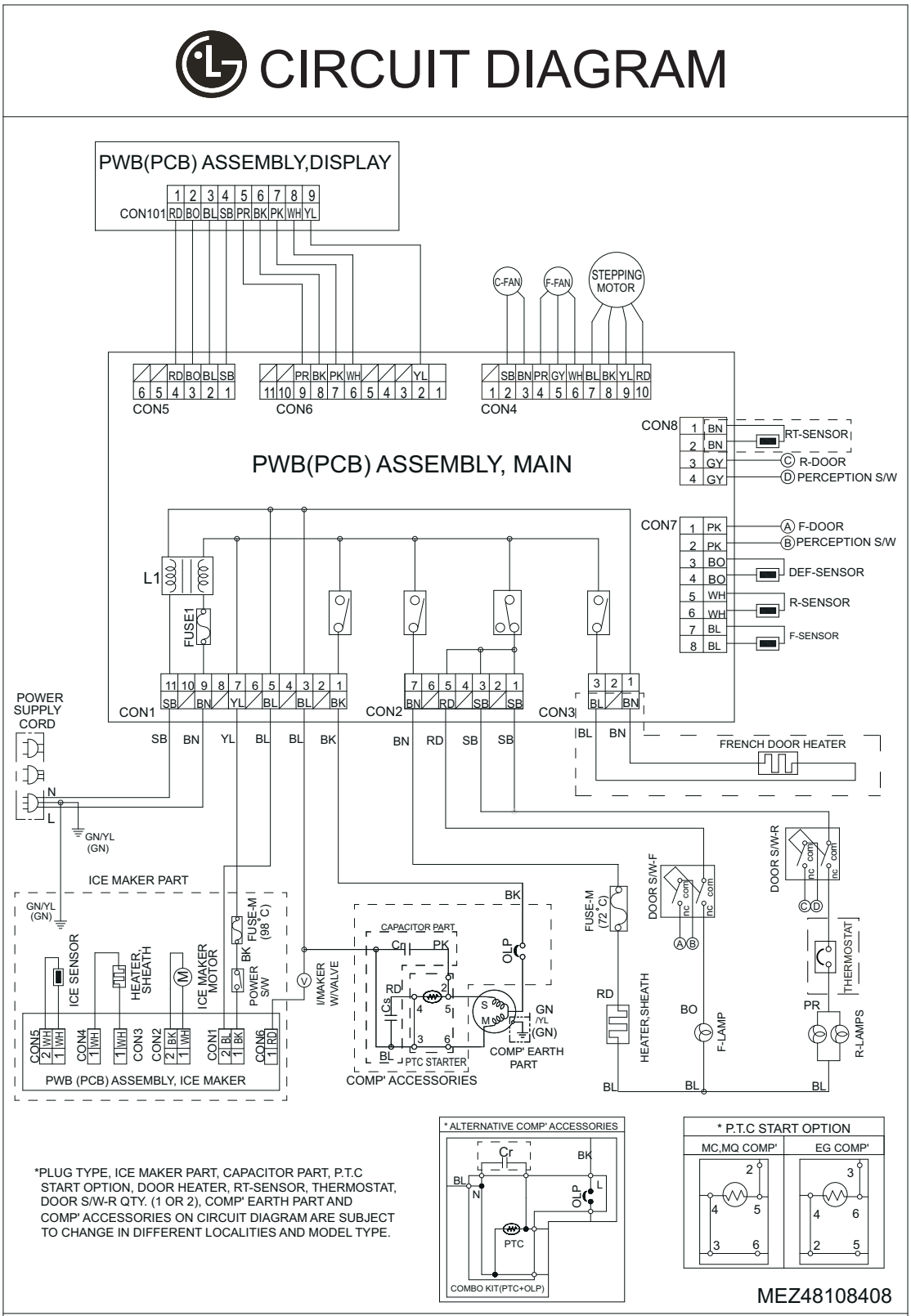


(4) Use a L-shaped flap tool to pry off the cover.

(5) Assembly in reverse order of disassembly.

5. CIRCUIT DIAGRAM

CIRCUIT DIAGRAM



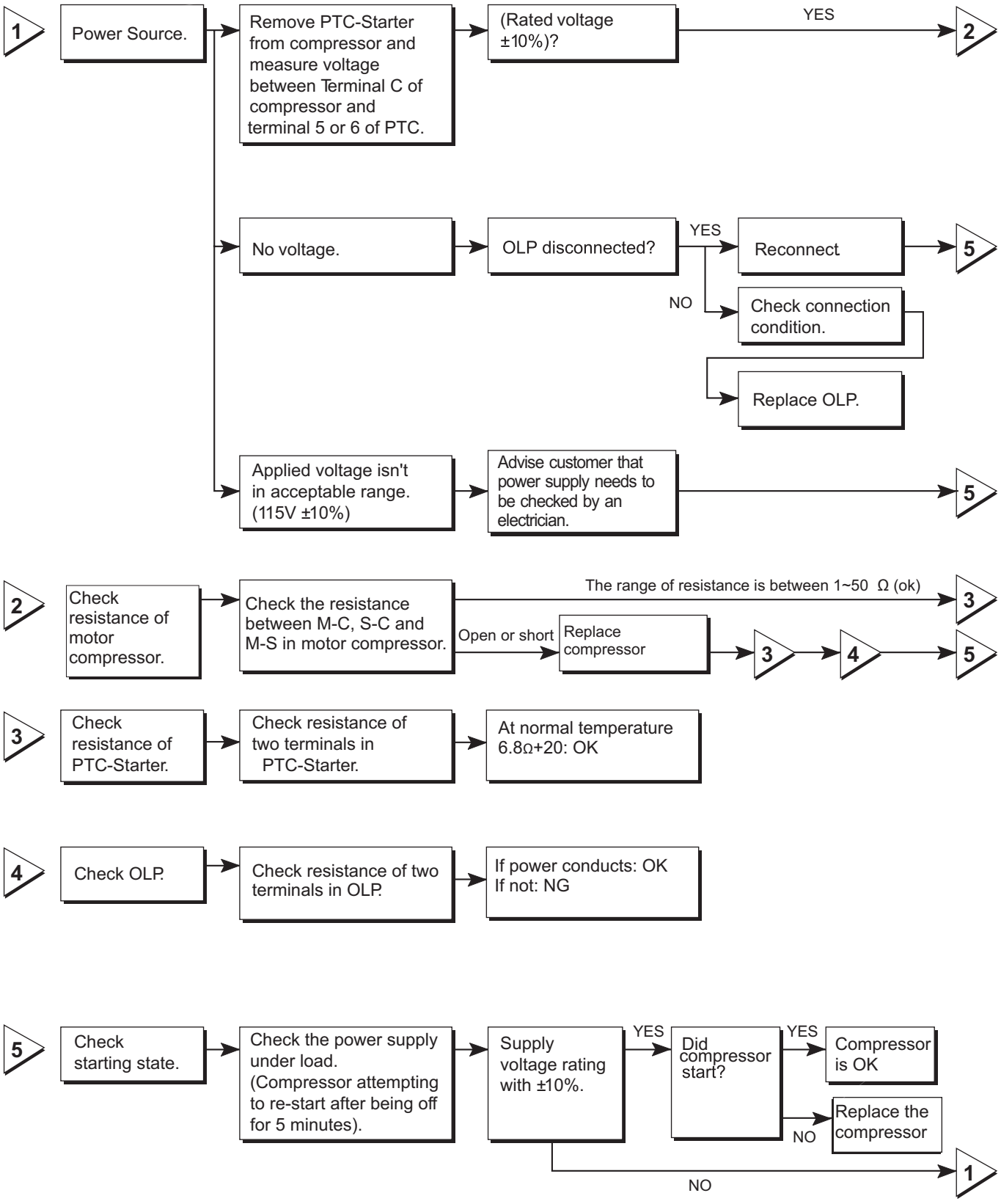
*PLUG TYPE, ICE MAKER PART, CAPACITOR PART, P.T.C START OPTION, DOOR HEATER, RT-SENSOR, THERMOSTAT, DOOR S/W-R QTY. (1 OR 2), COMP' EARTH PART AND COMP' ACCESSORIES ON CIRCUIT DIAGRAM ARE SUBJECT TO CHANGE IN DIFFERENT LOCALITIES AND MODEL TYPE.

MEZ48108408

BK:BLACK	WH:WHITE	BN:BROWN	BO:BRIGHT ORANGE	SB:SKY BLUE	RD:RED
YL:YELLOW	PK:PINK	GN:GREEN	PR:PURPLE	GY:GREY	BL:BLUE

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 1)

Observation value is 115V/60Hz : 6.8Ω±20%

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

Replace PTC-Starter.

Separate OLP from compressor and check resistance value between two terminals of OLP whit a tester.
(Figure 2)

Shows continuity

Check another electric component.

Open

Replace OLP.

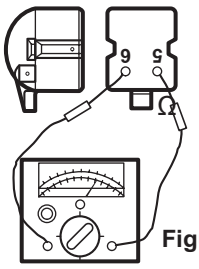


Figure 1

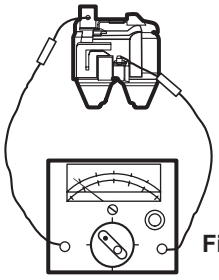
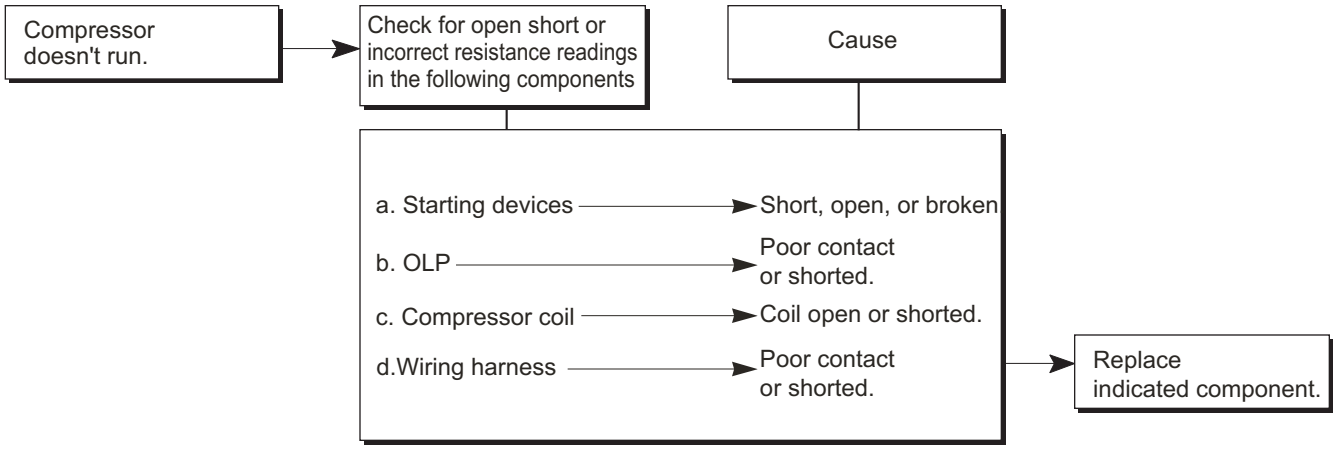


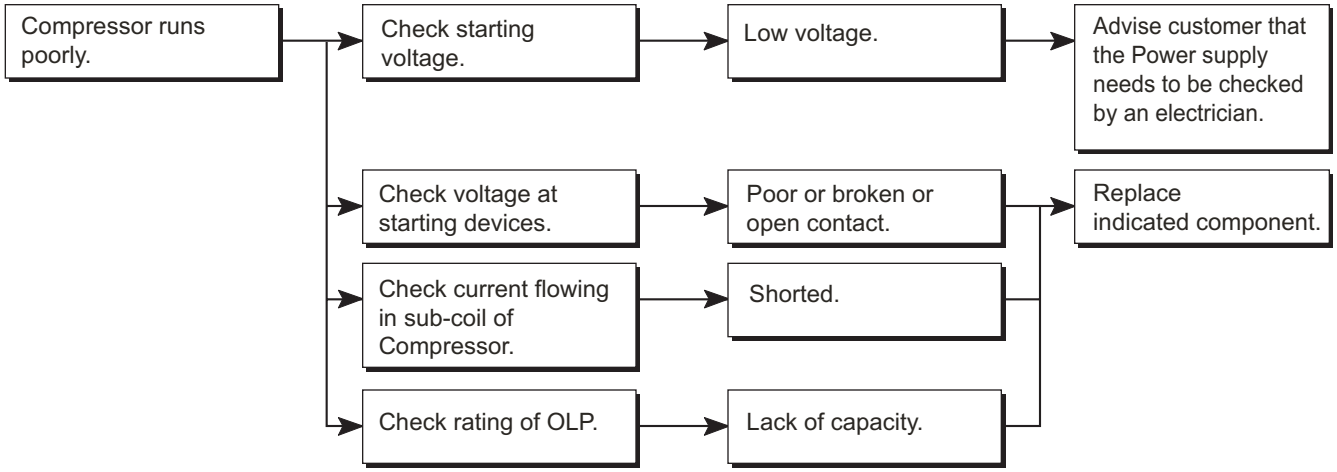
Figure 2

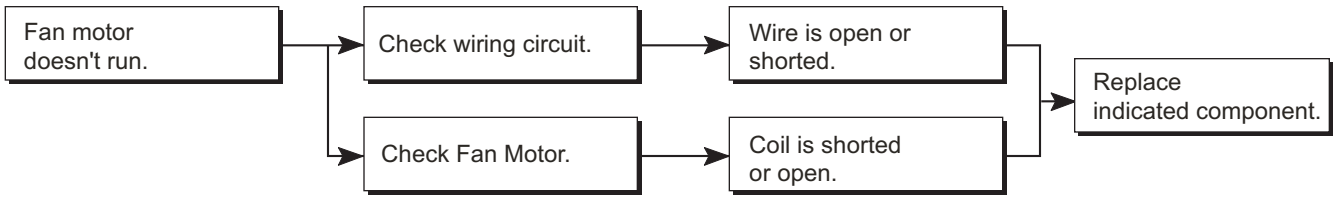
6-3 OTHER ELECTRICAL COMPONENTS

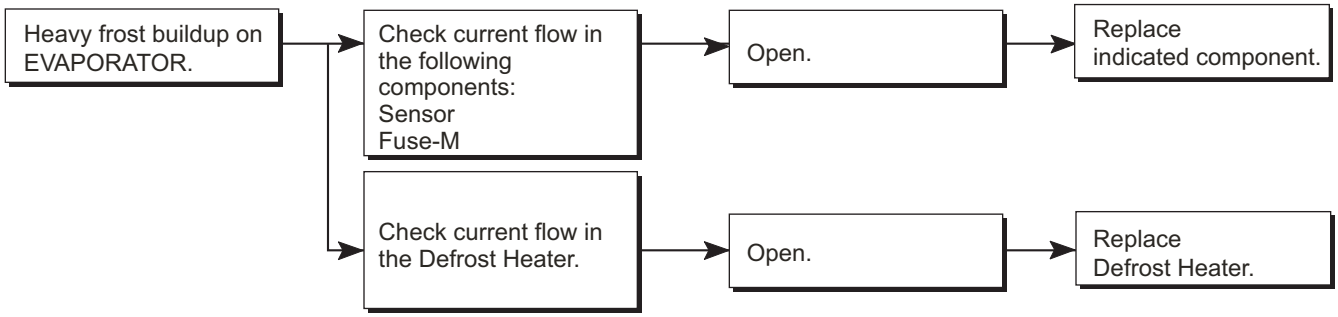
• Not cooling at all



•Poor cooling performance



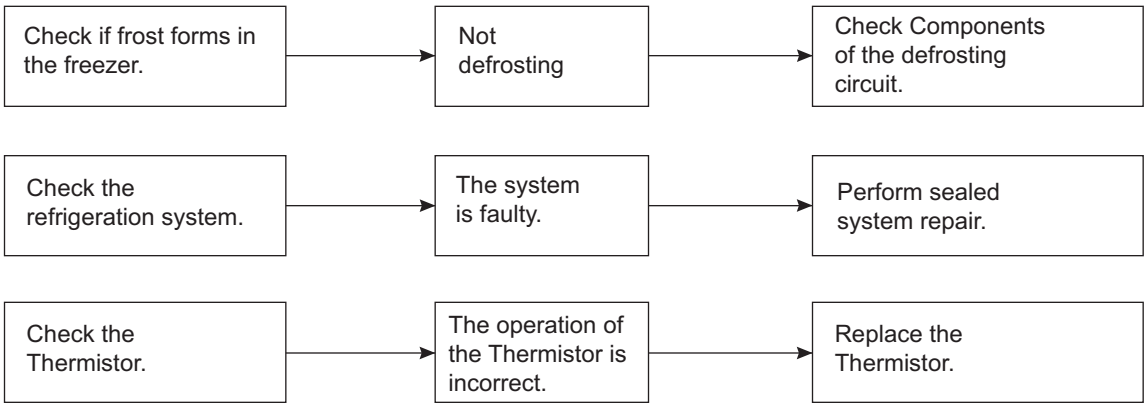




6-4 SERVICE DIAGNOSIS CHART

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 5°C?	• 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:

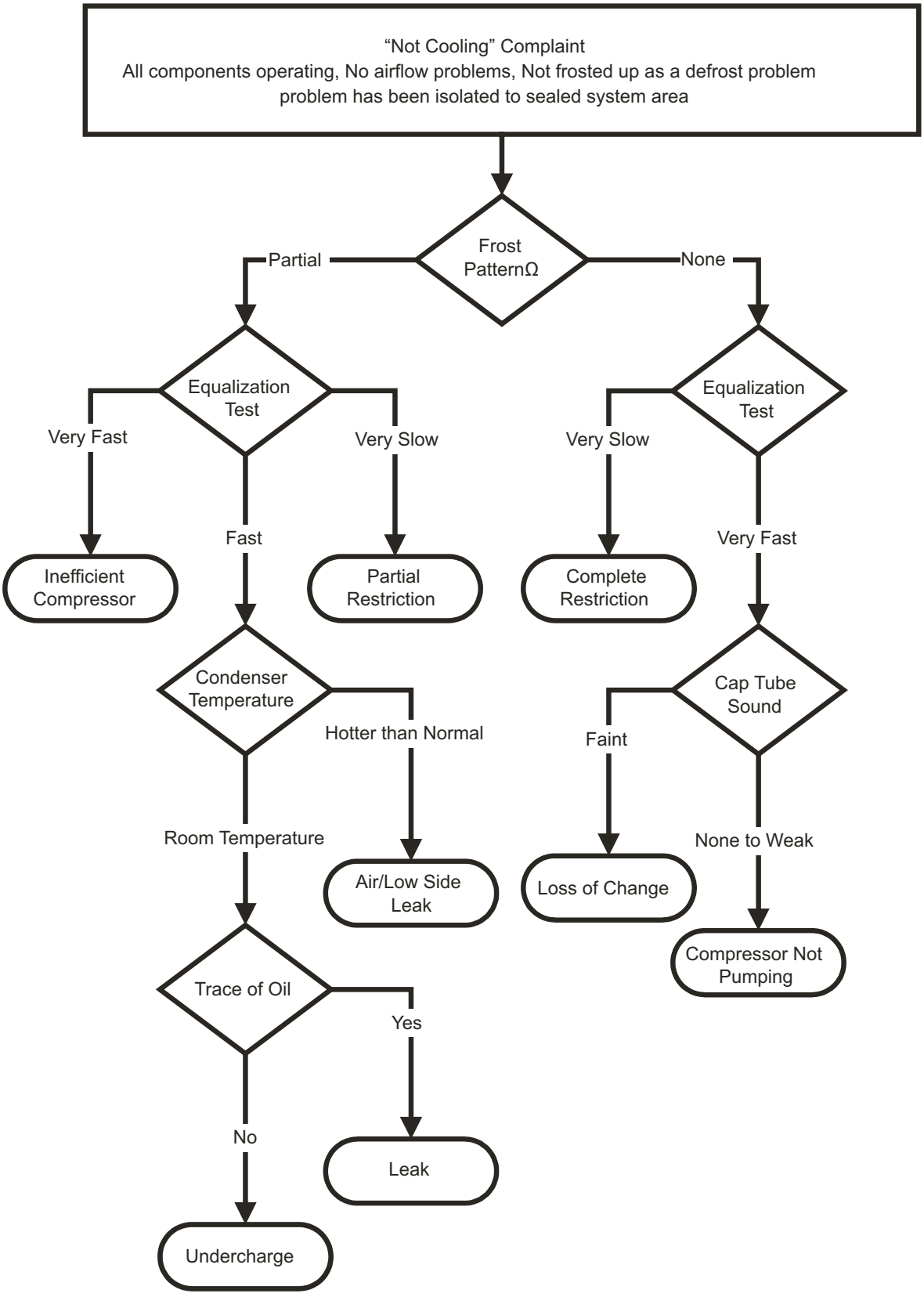


6-5 REFRIGERATION CYCLE

- **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.
CLOGGED BY DUST	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

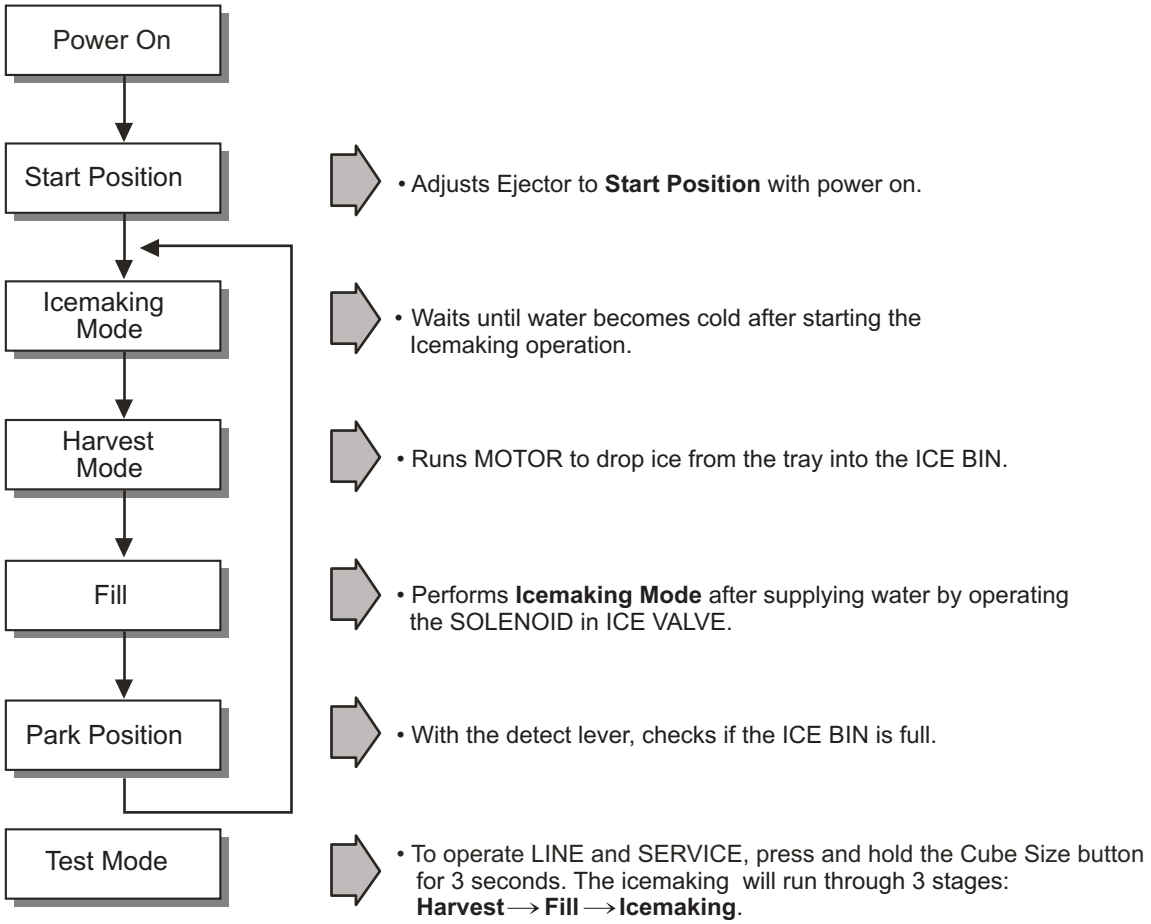


(The equalization test is trying to restart a compressor using a start kit after it has been operating.)

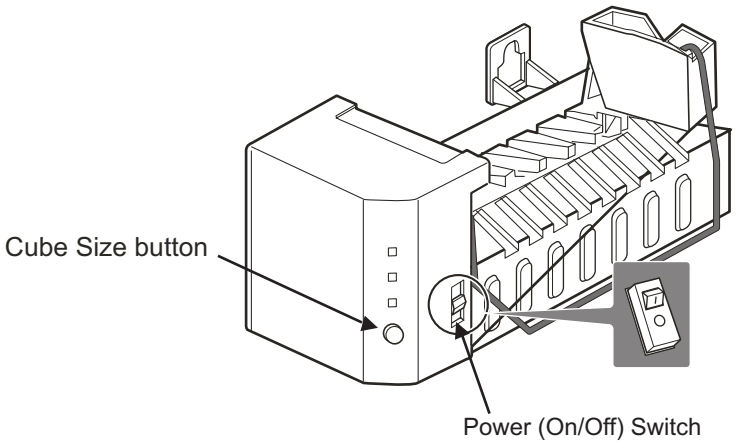
7. OPERATION PRINCIPLE AND REPAIR METHOD OF ICEMAKER

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

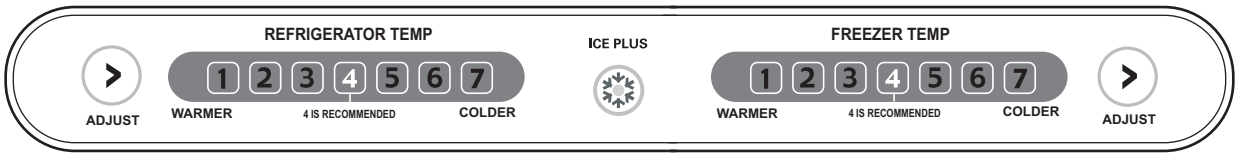
(*)ERROR indicators in table can be checked only in TEST mode.

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 is overloaded.
   But standard RPM 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 (2500RPM): initial power on or load corresponding operation, ICE PLUS.
   Normal speed (2200 RPM): general working conditions.
5. Fan motor is stopped when Refrigerator Door is opened.
6. The fan motor is stopped when Freezer Door is opened (only if compressor status is OFF)

8-1-3 Ice Plus

1. The purpose of this funstion 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 21 hours 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. Fot 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.
   (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 cmpartment rotates at high speed during ICE PLUS.

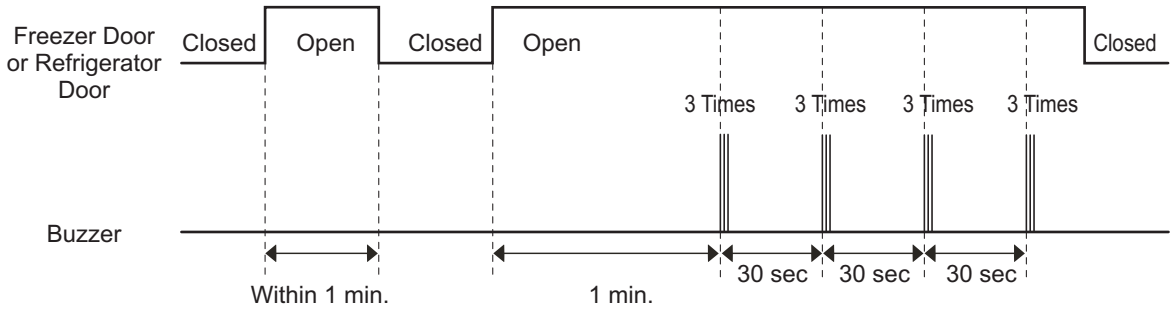
For the rest of 21 hours, the freezer will be controlled at the lowest temperature.

8-1-4 Refrigerator Lamp Auto OFF

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 ½ 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.

8-1-7 Defrosting (Removing Frost)

1. defrosting starts each time when compressor running time reach 7 hours, if any door hasn't been opened.
2. In case of any door has been opened the defrosting period will start considering the next conditions:
If compressor running time is bigger than 7 hours when door is opened: Defrosting starts immediately.
If compressor running time is less than 7 hours when door is opened: Defrosting starts after a compensation time is applied.
3. For initial power on or for restoring power, defrosting starts when the compressor running time reaches 4 hours.
4. Defrosting 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 2 hours, the defrost mode is malfunctioning.
5. Defrosting won't function if its sensor is defective (wires are cut or short circuited).

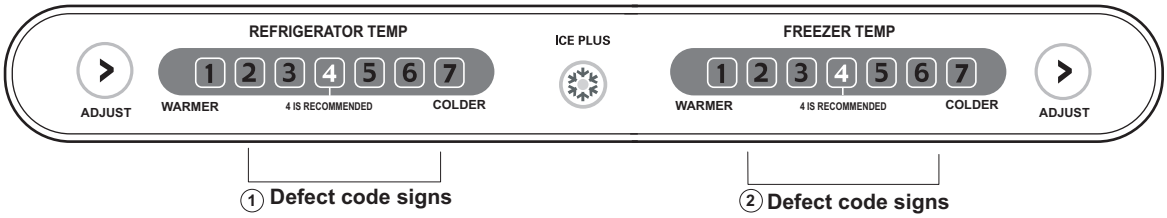
8-1-8 Electrical parts are turned on sequentially

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
	Temperature of defrosting sensor is lower than 45°C (when power cuts SERVICE)	POWER ON → (in ½ second) → Defrosting heater ON → (in 10 second) → Defrosting heater OFF POWER ON → (in ½ second) → COMP ON → (in ½ second) → Freezer FAN ON
Reset to normal operation from TEST MODE		Total load OFF → (in 7 minute) → COMP ON → (in ½ second) → 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	
4	RT-sensor error (LED check mode)	All off	○ ○ ○ ● ○ ○ ○ Visible in LED CHECK MODE	Open or short circuit wire	
5	Poor of defrost	All off	● ● ● ● ○ ○ ○	2 hours later after starting defrost, if sensor doesn´t be over 46°F(8°C)	Snapping of defrost heater or Temperature fuse, pull-out of connector (indicated minimum 2 hours after failure occurs)
6	Failure of BLDC Fan Motor at Freezing Compartment	All off	● ● ● ● ● ○ ○	If there is no fan motor signal for more than 65sec in operation fan motor	Poor motor, hooking to wires of fan, contact of structures to fan, snapping or short circuit of Lead wires

DISPLAY CHECK MODE: Press at the same time ADJUST REFRIGERATOR TEMP & ADJUST FREEZER 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 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 ICE PLUS key and ADJUST key of Freezer Temperature at the same time over 3 seconds.	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	Maximum test time: 5 Minutes
TEST2	Push ICE PLUS Key and ADJUST key of Freezer Temperature at the same time over 3 seconds 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 ICE PLUS key and AJUST key of Freezer Temp. At the same time over 3 seconds 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:

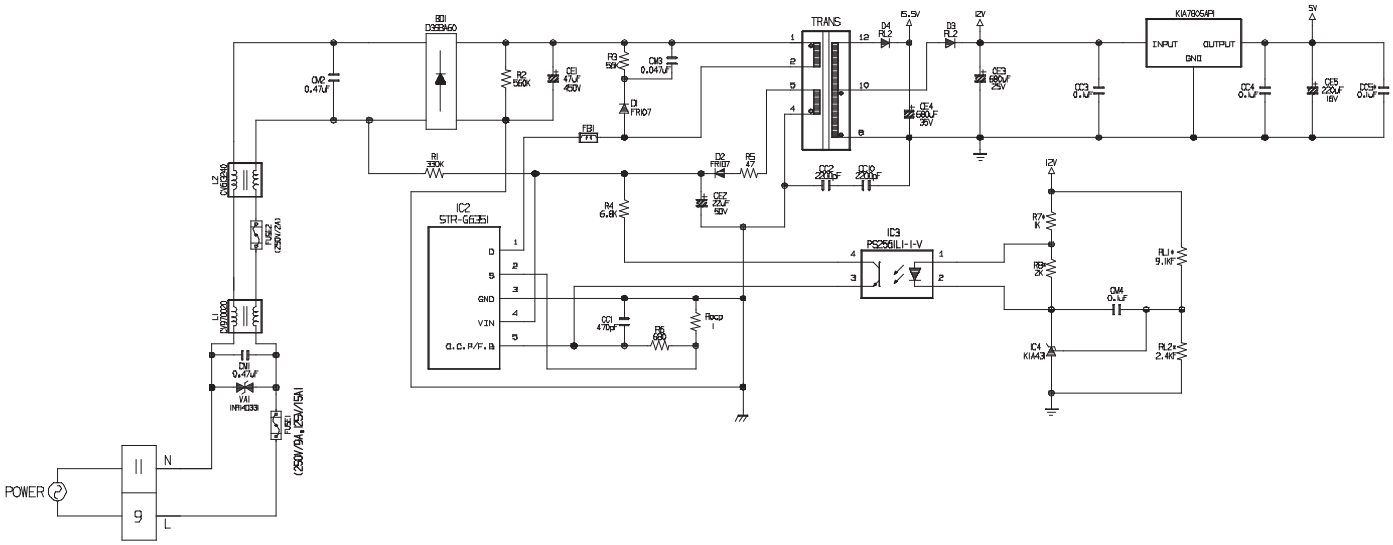
In case the freezer fan is in operation when the ADJUST key in Refrigerator and Freezer Temp. Control are pressed for more than one second at the same time freezer fan RPM changes. (For example if high speed, to normal speed or if normal speed, to high speed for 30 seconds)
After 30 seconds, it turns 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 demonstration 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 demonstrated)
4. It reset if you do again as clause.

8-2 PCB FUNCTION

8-2-1 Power Circuit



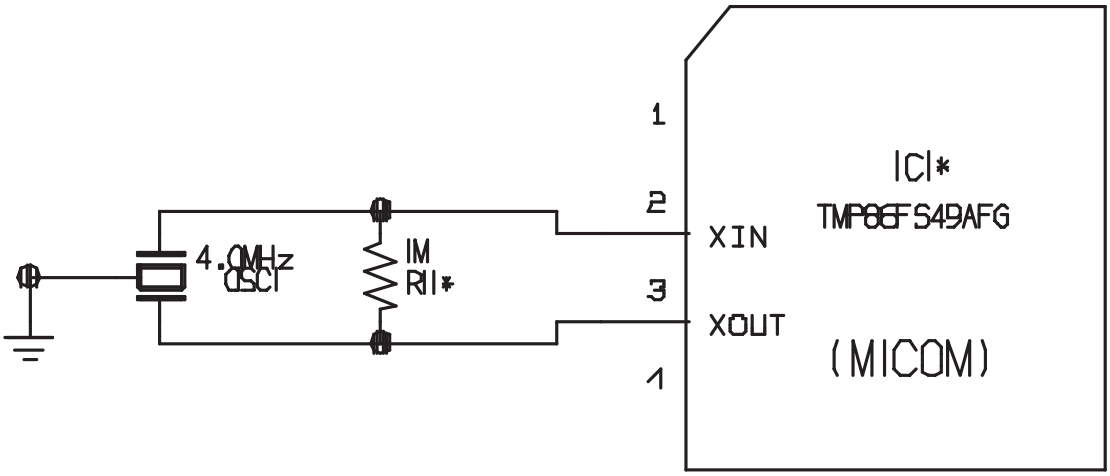
The secondary part of the TRANSFORMER is composed of the power supply for the display, the BLDC FAN Motor drive (15.5 V), the relay drive (12 Vdc) and the MICOM and IC (5 Vdc).

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

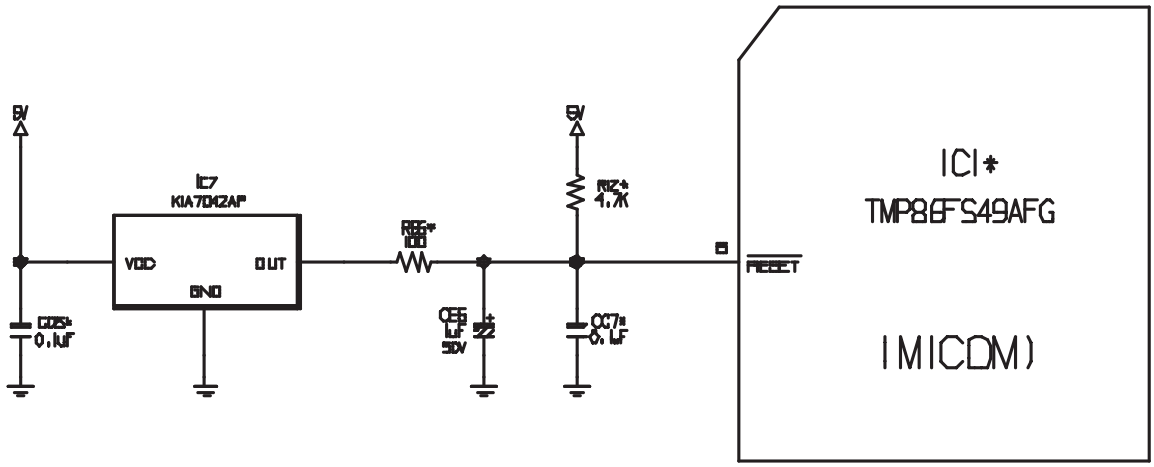
VA1 is a part for preventing over voltage and noise. When high voltage is applied, the inside elements are short-circuited and broken, resulting in blowout of the fuse in order to protect the elements of the secondary part of the TRANSFORMER.

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.

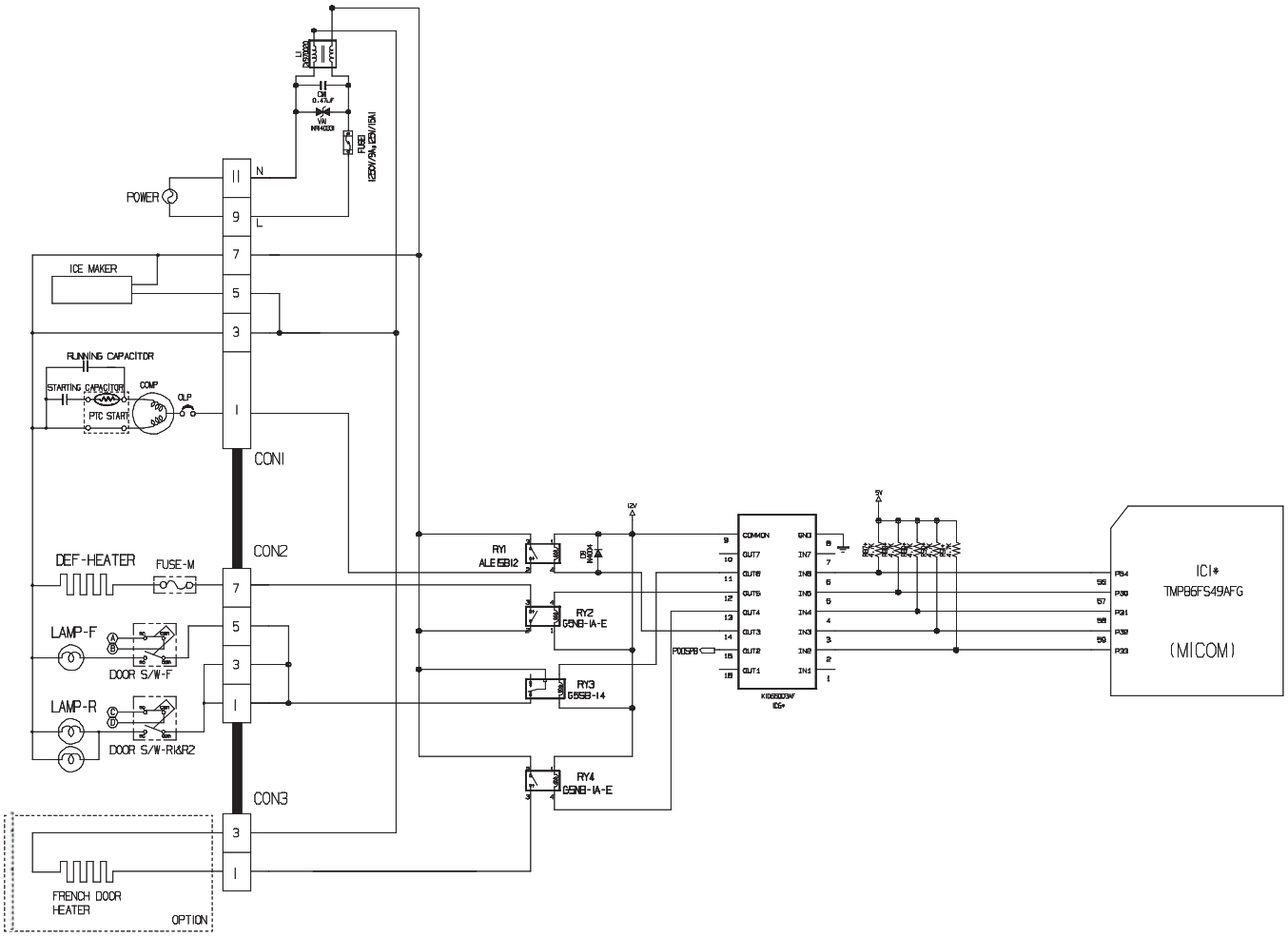
8-2-3 Reset Circuit



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

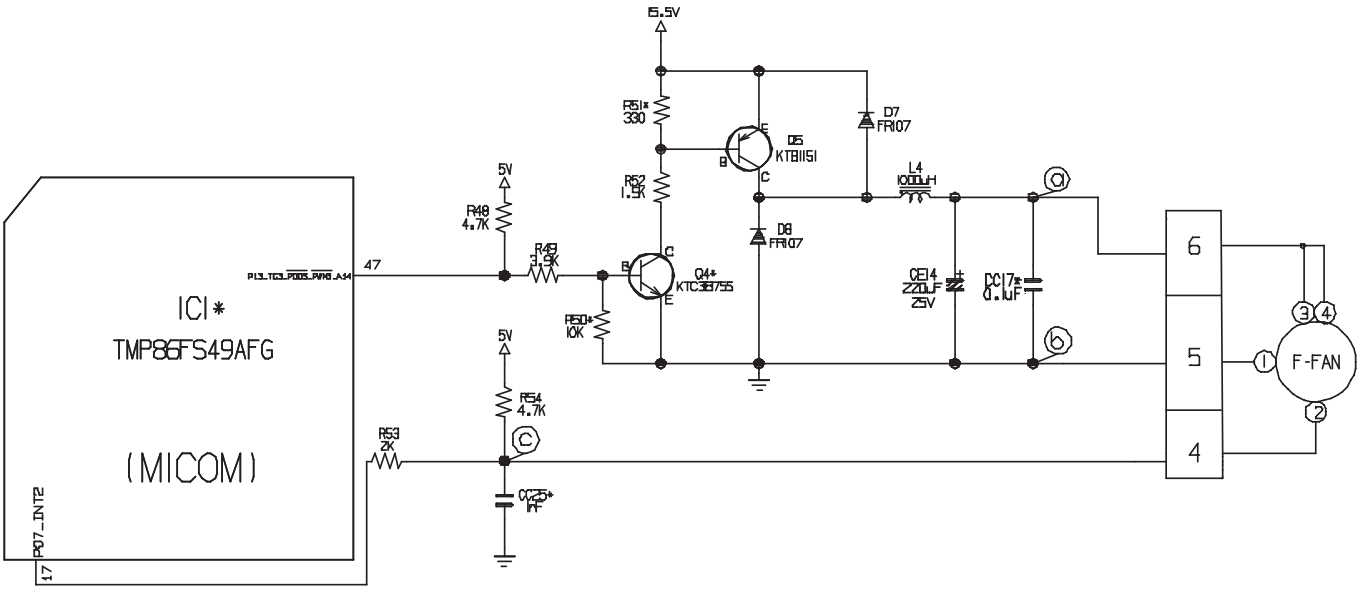
1. Load Drive Condition Check



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. Fan motor 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 it 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.

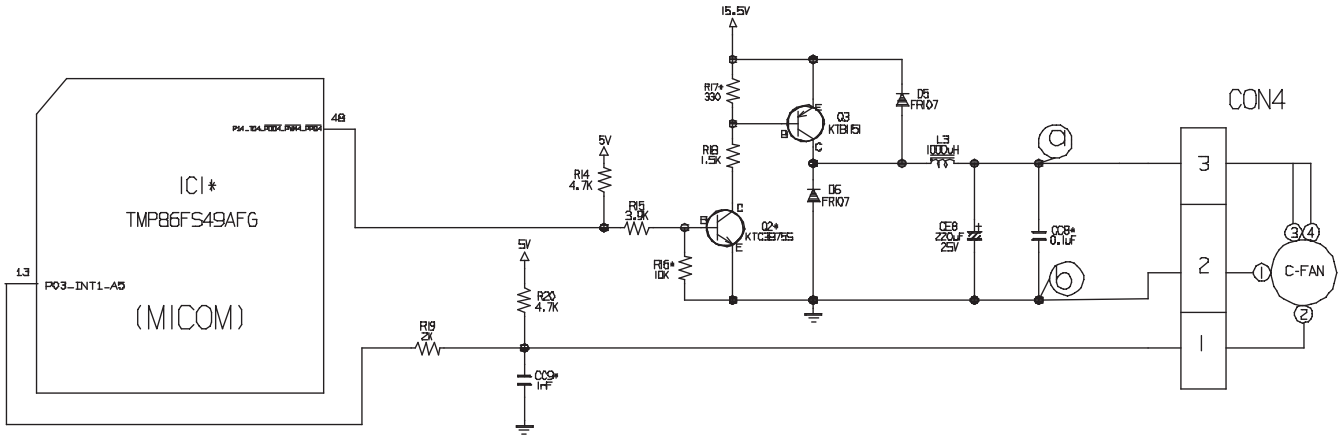


	A part	B part	C part
MOTOR OFF	2V or less	0V	5V
MOTOR ON	13V ~ 15V	0V	2V ~ 3V

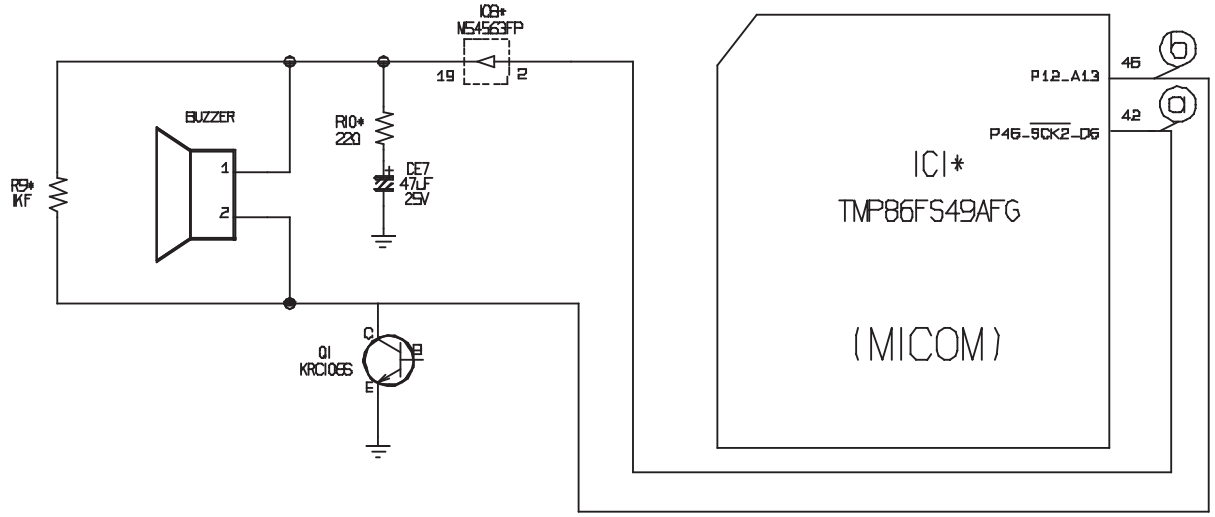
3. Cooling motor driving circuit (machine room)

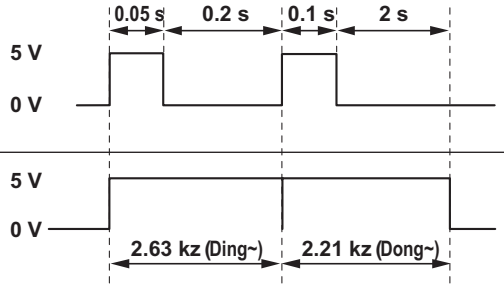
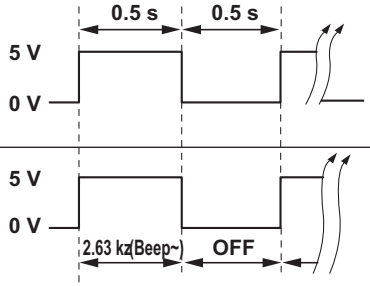
1. This circuit makes standby power 0 by cutting off power supplied to Iss inside of the fan motor in the fan motor OFF.
2. This circuit prevents over-driving the fan motor by cutting off power applied to the fan motor in the lock of fan motor by sensing the operation RPM of the fan motor.

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

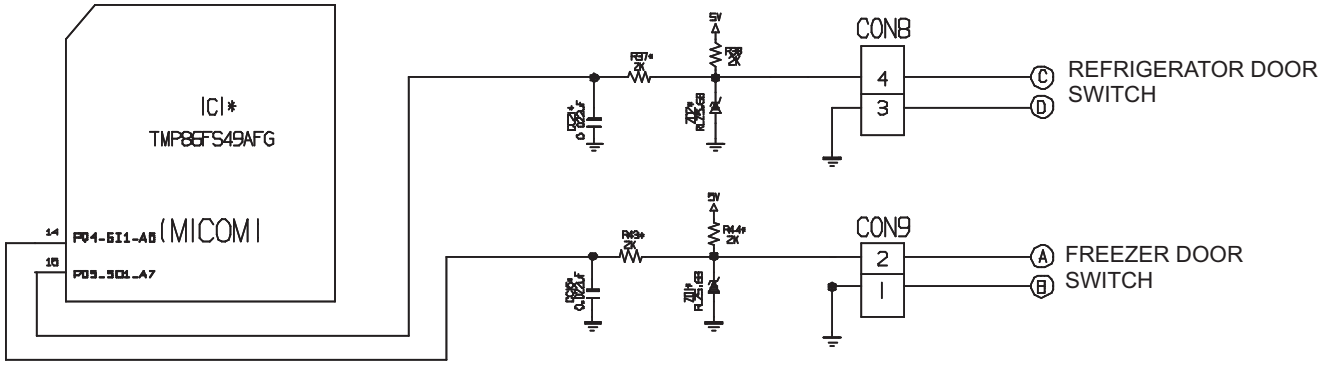


4. Buzzer Drive Condition Check



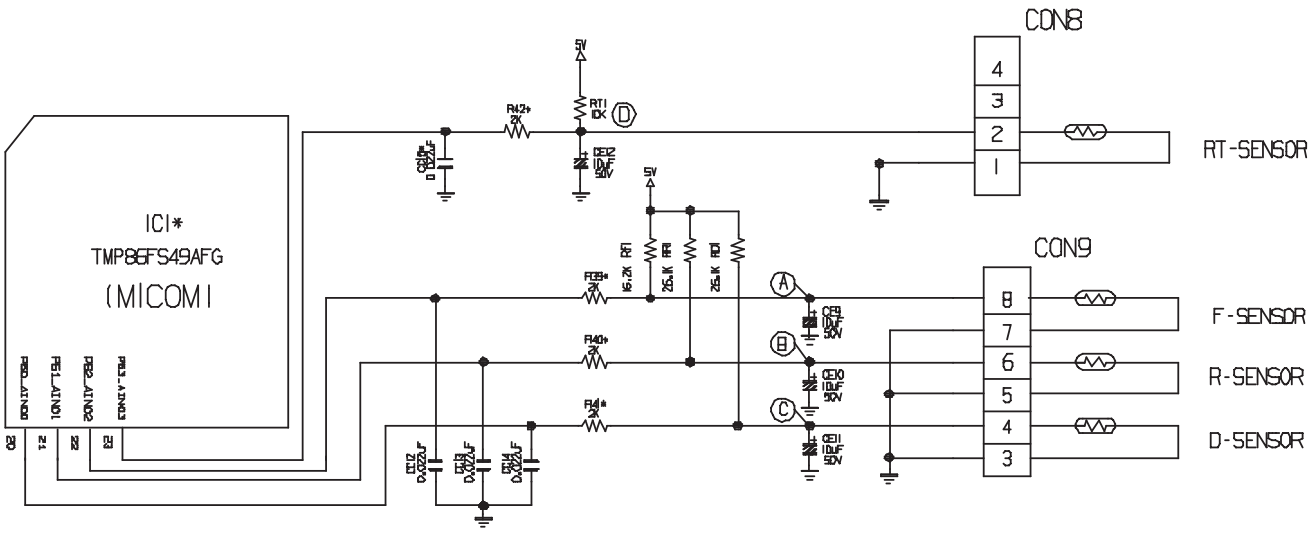
Condition / Measure-ment Location	Tone (Ding~Dong~) when the button on the display is pushed.	Alarm for open door (beep-beep-beep)	OFF
IC1 (Ⓐ)			**0 V**
IC1 (Ⓑ)			**0 V**

5. 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

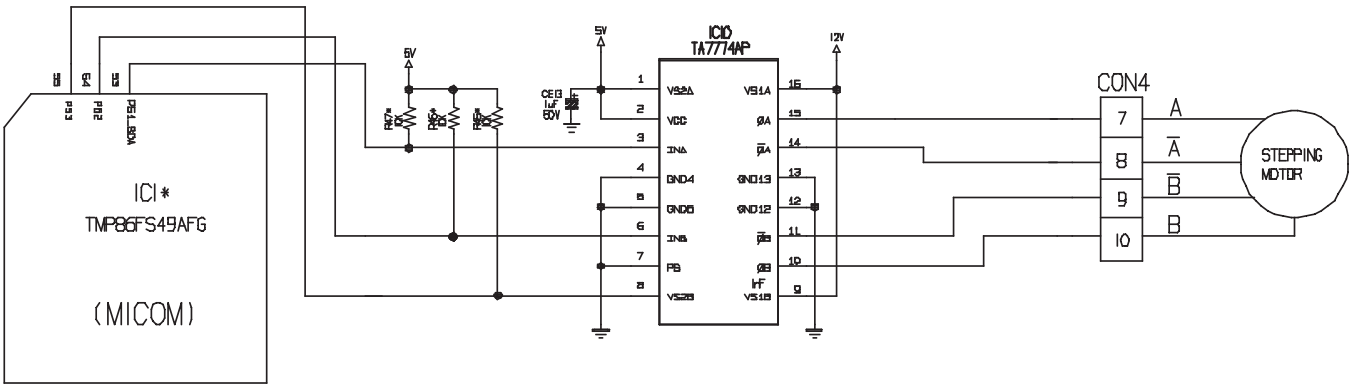


The upper CIRCUIT reads REFRIGERATOR temperature, FREEZER Temperature, and DEFROST-SENSOR temperature for defrosting and the indoor temperature for compensating for the surrounding temperature into MICOM. OPENING or SHORT state of each TEMPERATURE SENSOR are as follows:

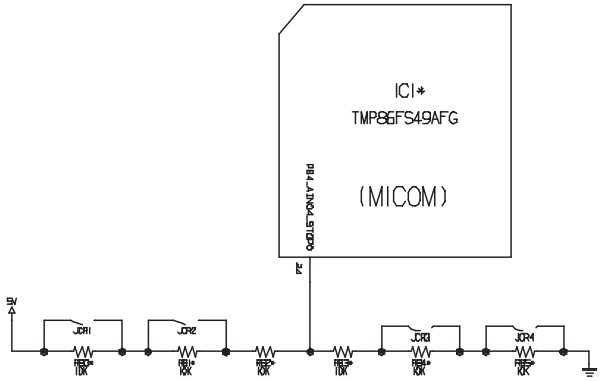
SENSOR	CHECK POINT	NORMAL (-30°C ~ 50°C)	SHORT-CIRCUITED	OPEN
Freezer Sensor	POINT Ⓐ Voltage	0.5 V ~ 4.5 V	0 V	5 V
Refrigerator Sensor	POINT Ⓑ Voltage			
Defrosting Sensor	POINT Ⓒ Voltage			
RT Sensor	POINT Ⓓ Voltage			

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	Colder
JCR4	R -1.0 deg compensation	

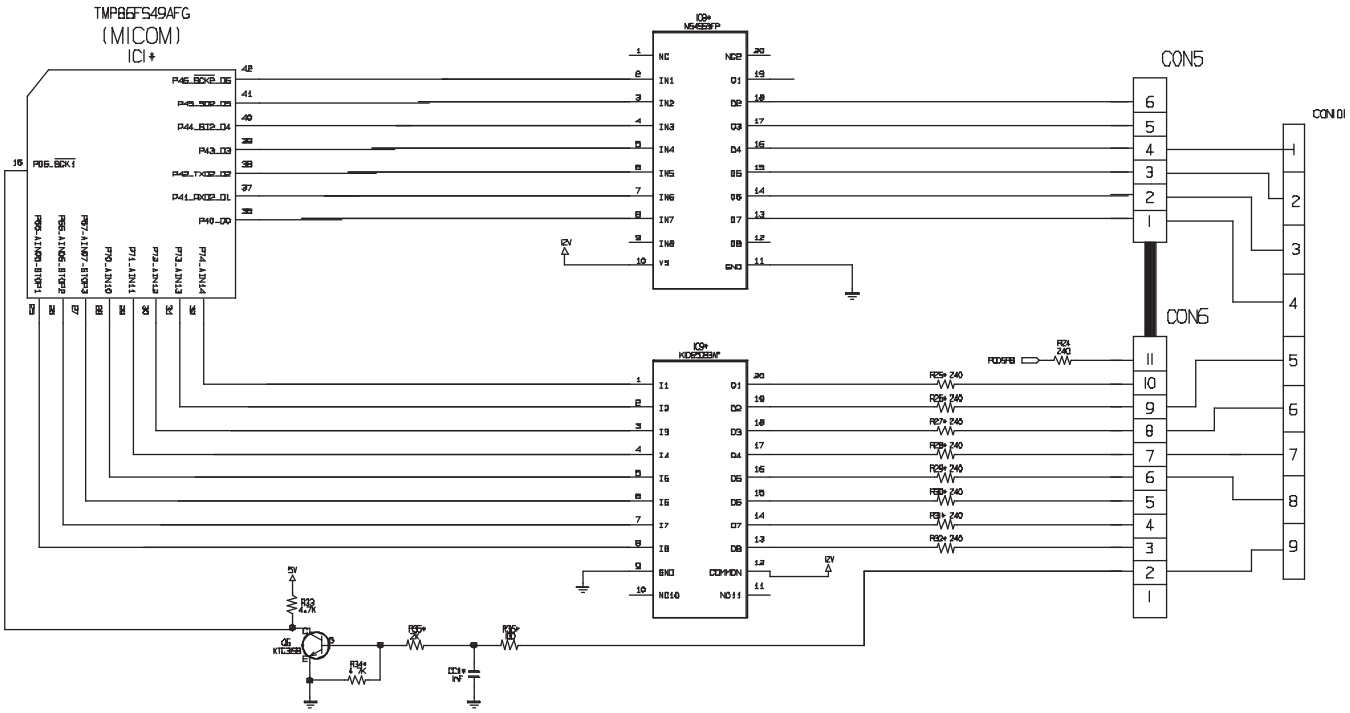
Table of temperature compensation by cutting JUMP WIRE to easy SVC temperature adjustments
+1deg, +1deg, -1deg, -1deg.

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.

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

The circuit shown below determinates 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 MODULE). The drive type is the scan type.



8-3 RESISTANCE SPECIFICATION OF SENSOR

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

- The resistance of the SENSOR has a ±5% common diference.
- 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.

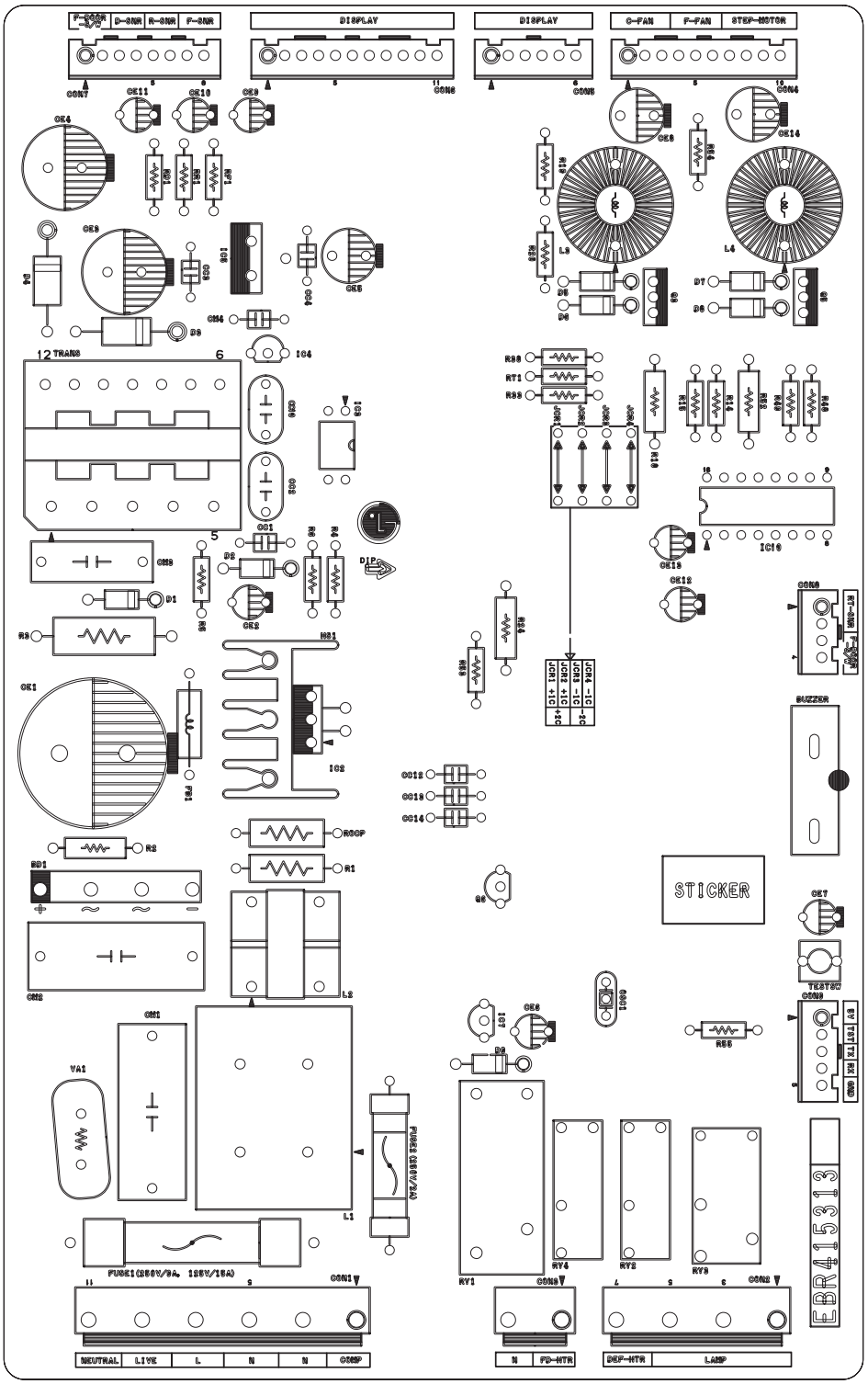
8-4 TROUBLESHOOTING

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.

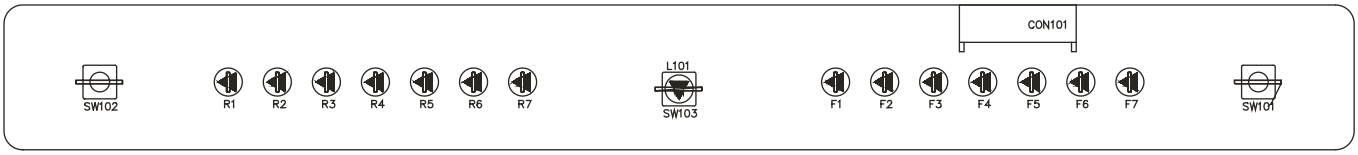
PROBLEM	INDICATED BY	CHECK	CHECKING METHOD	CAUSE	SOLUTION
COOLING is poor.	If REFRIGERATOR TEMPERATURE is too low.	1.If FREEZER TEMPERATURE isn ormal.	Check is FREEZER TEMPERATURE is too low.		Make sure the DOOR isattached.
		2. If amount of cool air from FAN MOTOR is sufficient.	Make sure that the amount 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



8-5-2 PWB Assembly, Display and parts list

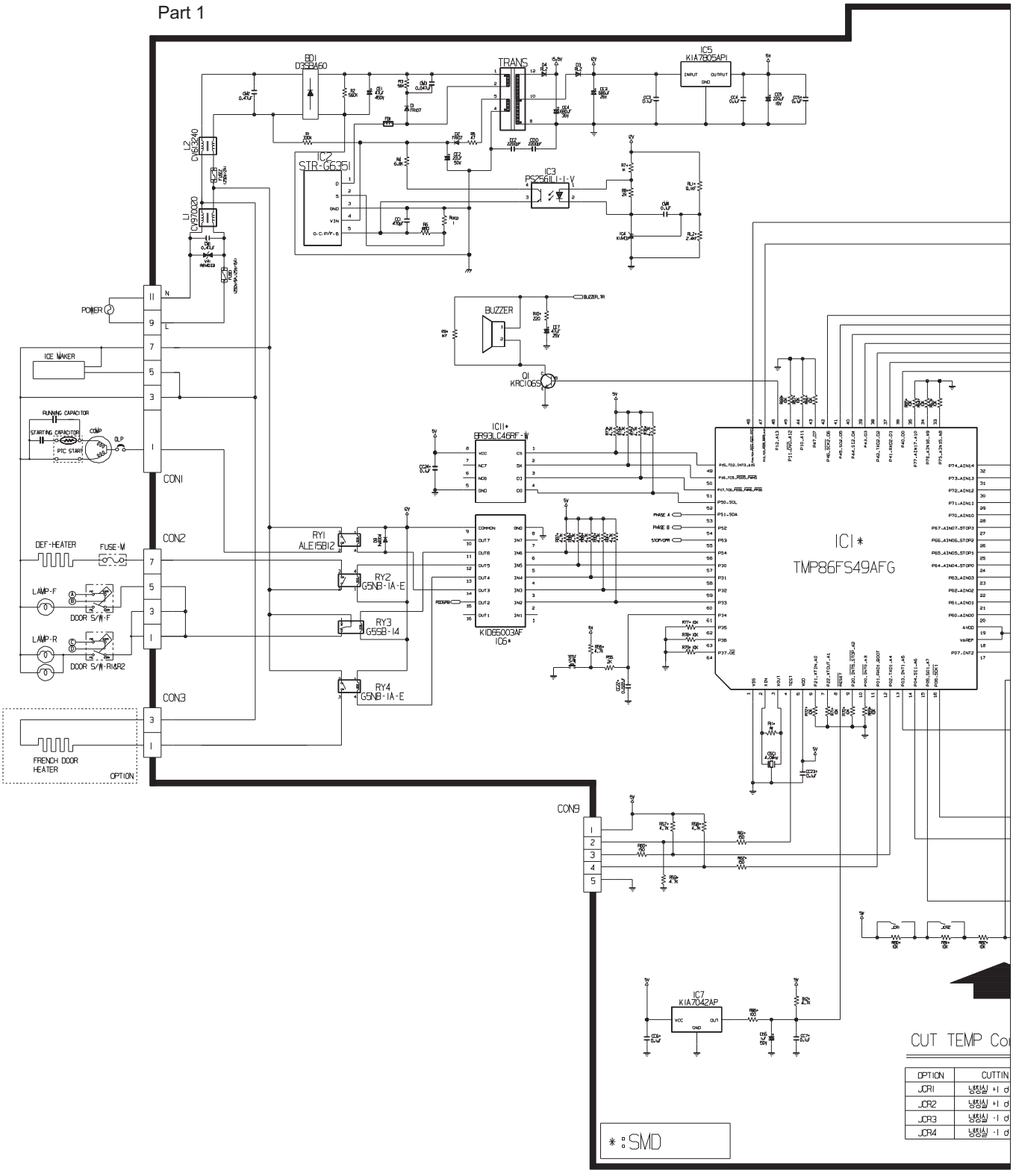


Qty	No	P/N□	DESCRIPTI□N	SPEC	MAKER	REMARK
1	1	6870JB8091A	PWB(PCB)	KS-PJT G□□D/BETTER DISPLAY	D□□ SAN	t=1.6
	2					
1	3	6630AQ9159H	WAFER	SMAW250-09	YE□N H□	C□N101
	4					
2	5	6600RRT002K	SWITCH,TACT	JTP1230A JEIL 12V DC 50MA	JEIL	SW101,102
		6600JB8005A		KPT-1105A	KYUNG IN	
1	6	-	TACT S/W	KPT-1109G	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	-
0.01	13	49111004	S□LDER,S□LDERING	H63A	-	-
0.00005	14	59333105	FLUX	SG;0.825-0.830 K□REA F.H-206	K□KI	-

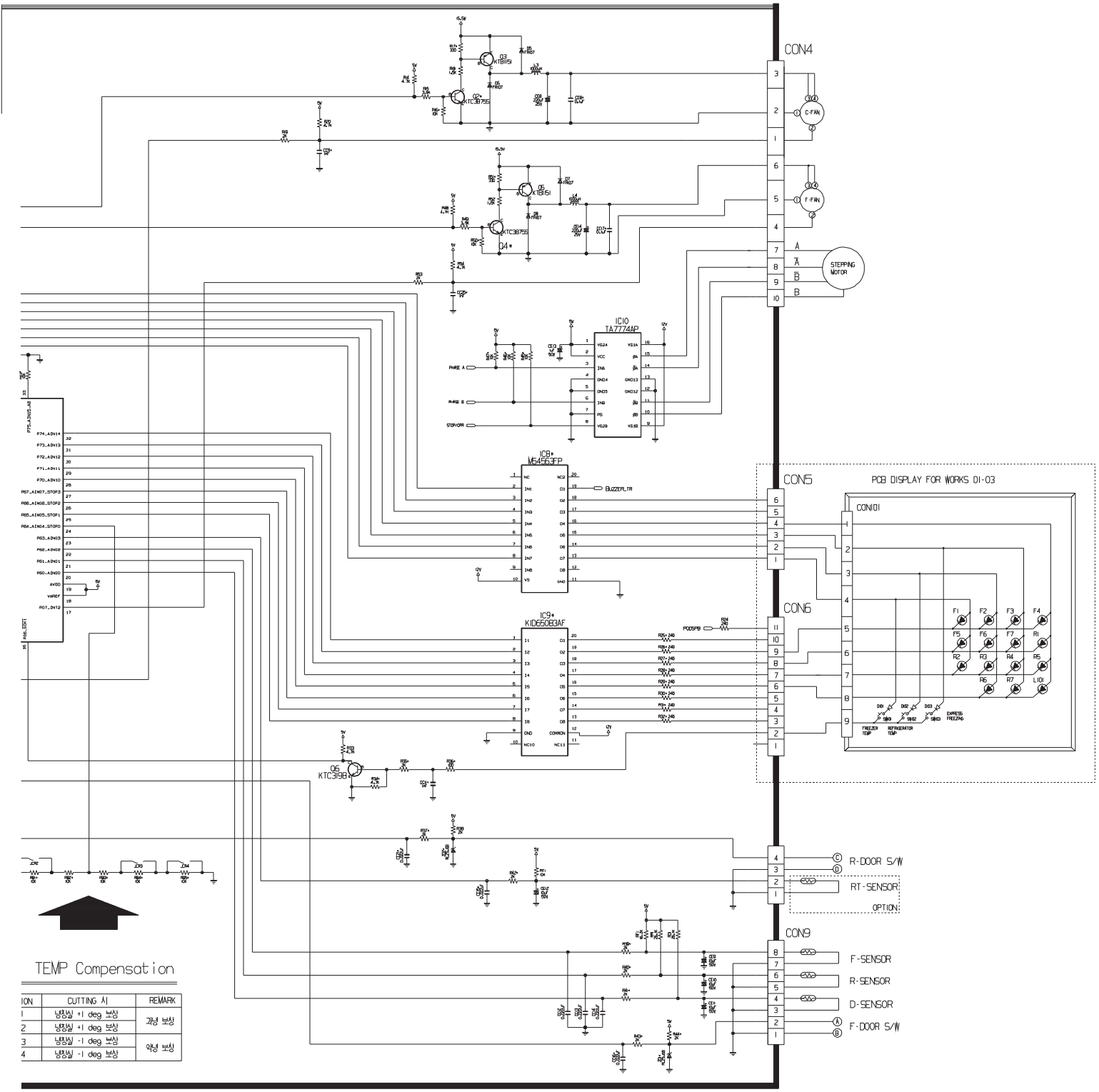
8-6 PWB DIAGRAM

8-6-1 PWB Main Assembly

Part 1



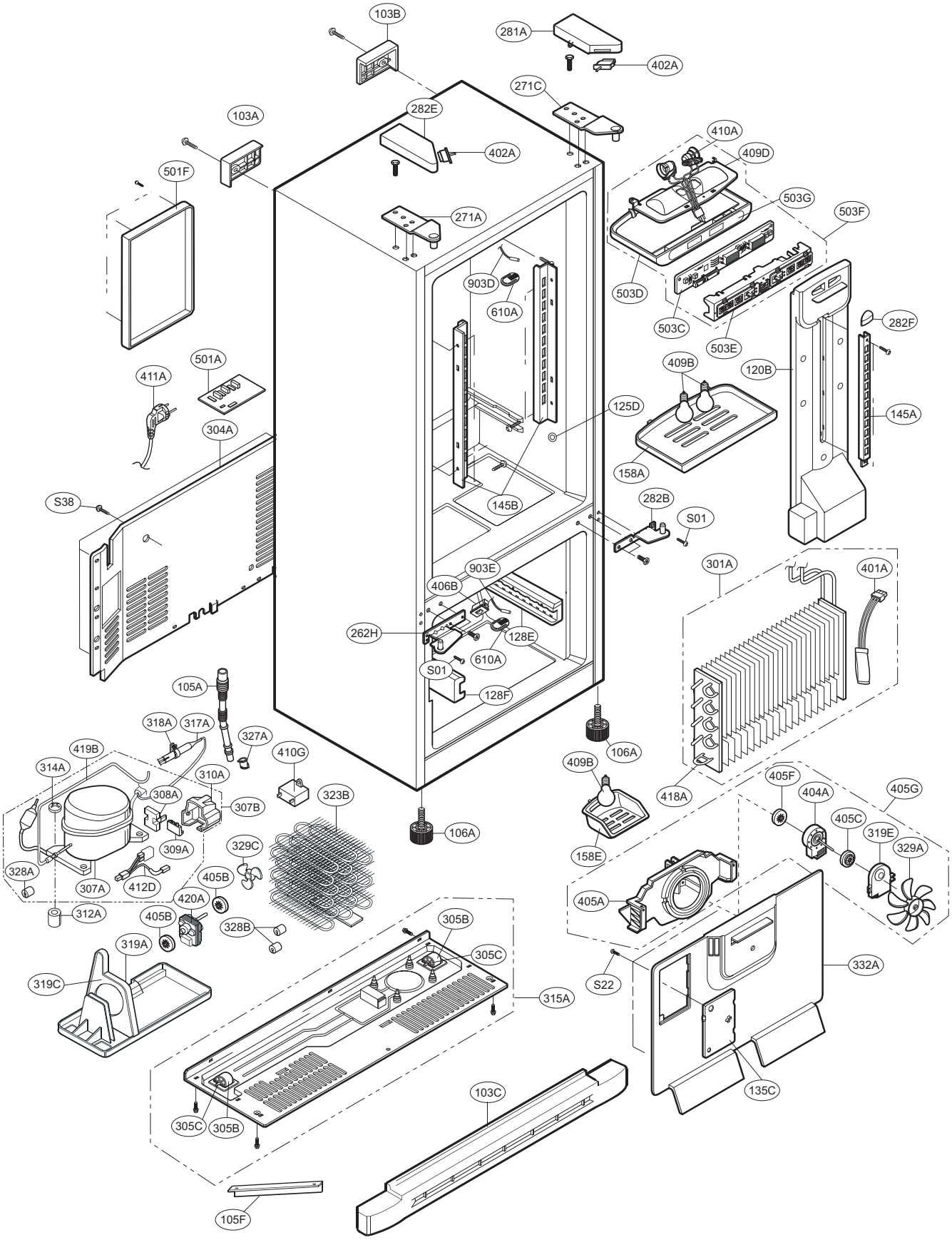
Part 2


CON4
C-FAN
F-FAN
STEPPING MOTOR
IC10
TA7774AP
IC8
M54563FP
BUZZER_TR
IC9
KID6503AF
CON5
PCB DISPLAY FOR WORKS 01-03
CON01
CON6
Q6
KTC3198
R-DOOR S/W
RT-SENSOR
OPTION
CON9
F-SENSOR
R-SENSOR
D-SENSOR
F-DOOR S/W
TEMP Compensation
CUTTING 시
REMARK
냉장실 +1 deg 보상
냉장실 +1 deg 보상
냉장실 -1 deg 보상
냉장실 -1 deg 보상
과냉 보상
약냉 보상

9.EXPLODED VIEW

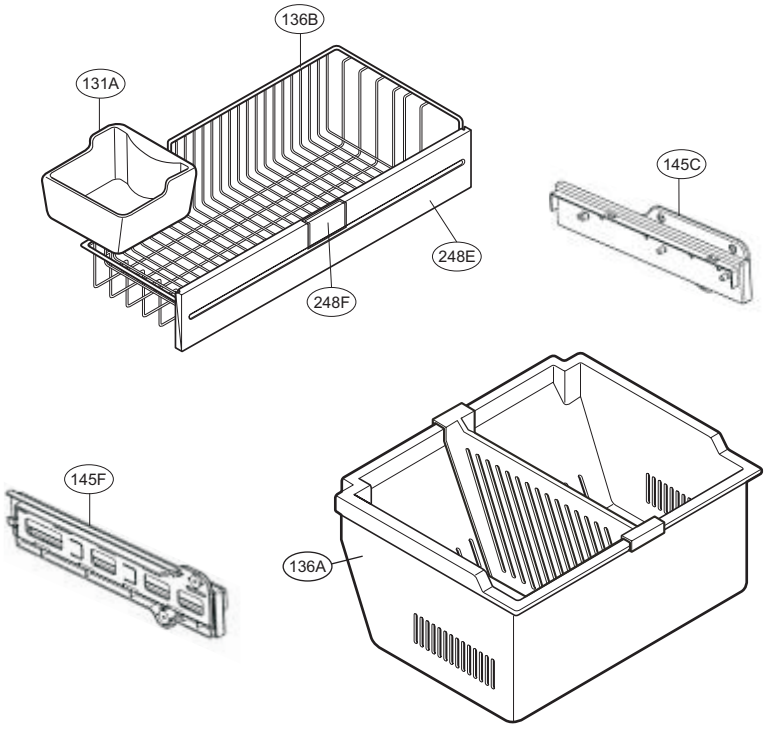
CASE PARTS

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



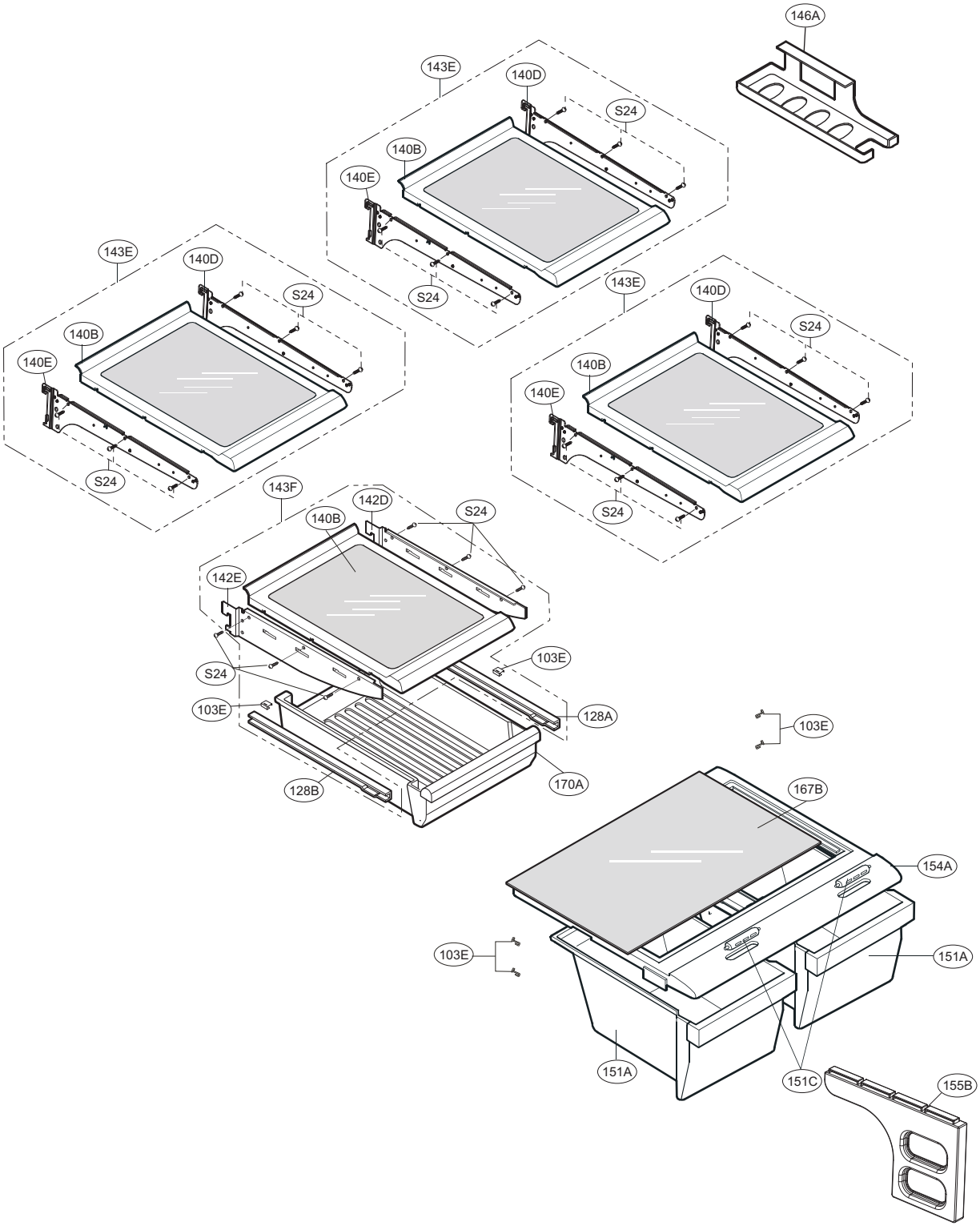
FREEZER PARTS

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



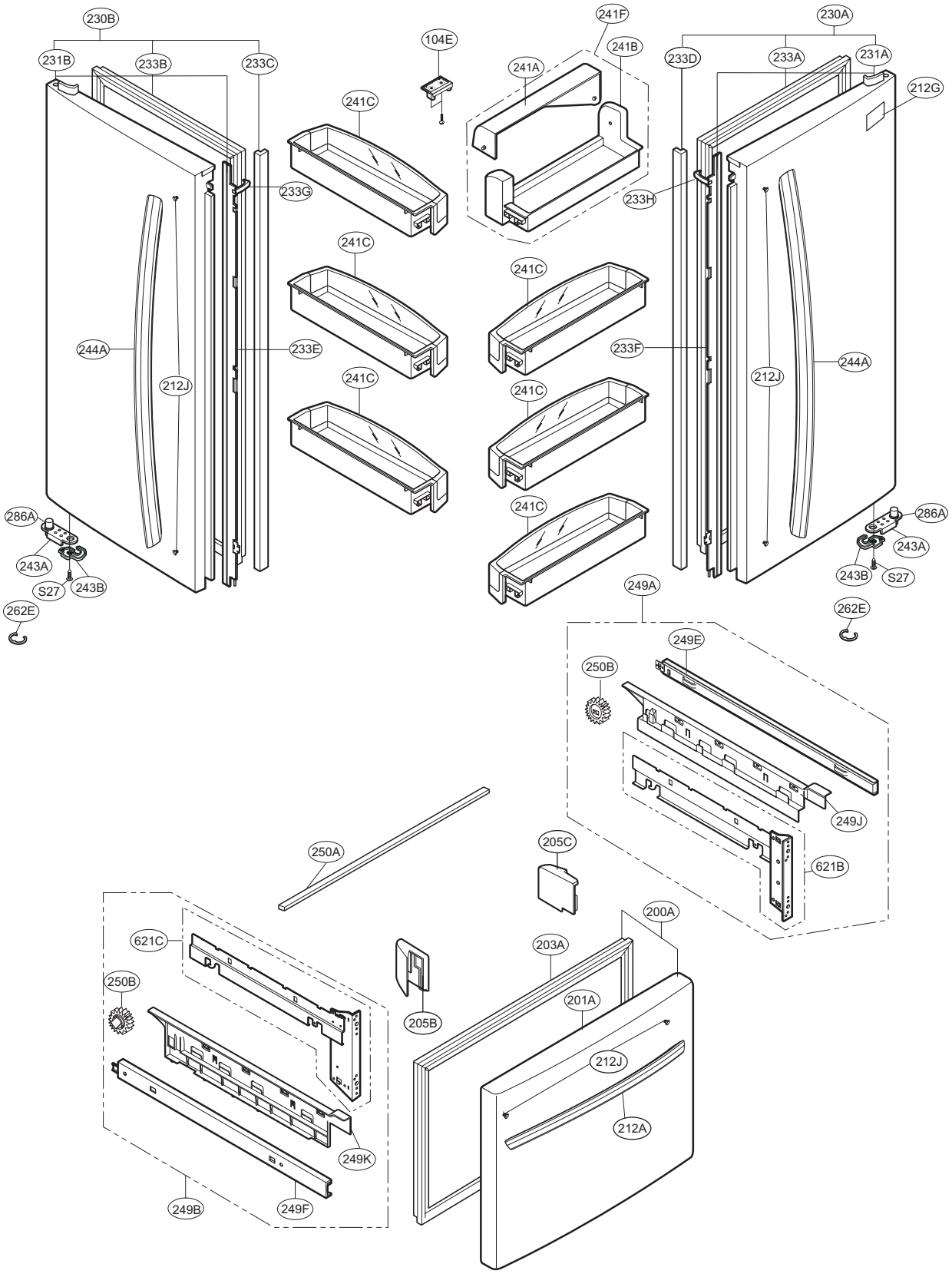
REFRIGERATOR PARTS

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



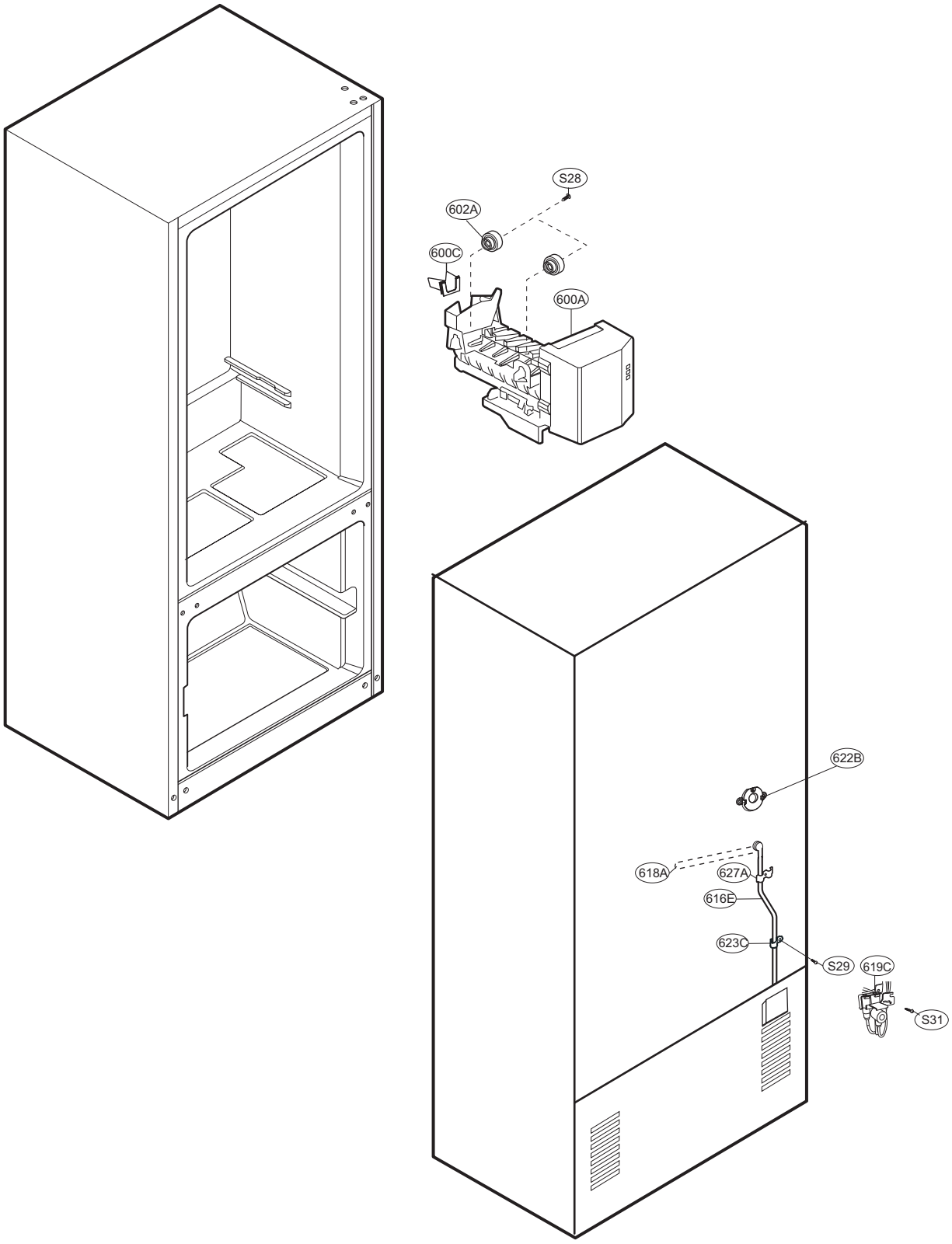
DOOR PARTS

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



WATER & ICEMAKER PARTS

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



LG Electronics Inc.

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