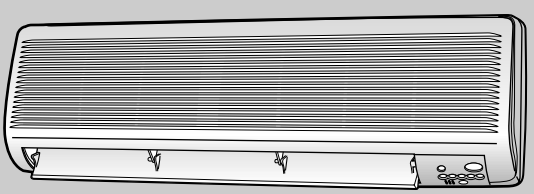
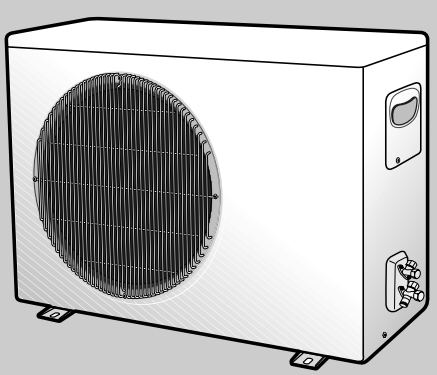
SAMSUNG

SERVICE Manual

SPLIT TYPE AIR CONDITIONER

Indoor Unit	Outdoor Unit
AS07A5(6)MA	US07A5(6)MA
AS09A5(6)MAF	US09A5(6)MAF
AS12AA(B)MCF	US12AA(B)MCF





Ⓔ DB98-15774A(2)

Safety Precautions

The following safety precautions must be taken when using your air conditioner.

⚠ *WARNING* Risk of electric shock. • Can cause injury or death. • Disconnect all remote electric power supplies before servicing, installing or cleaning. • This must be done by the manufacturer or its service agent or a similar qualified person in order to avoid a hazard.

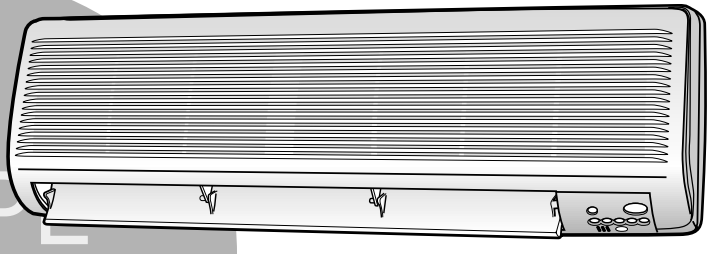
INSTALLING THE UNIT

- The unit should not be installed by the user. Ask the dealer or authorized company to install the units except room air conditioners for the U.S.A and Canada area.
- If the unit is installed improperly, water leakage, electric shock or fire may result.
- The air conditioner must be installed in accordance with national wiring regulations and safety regulations wherever applicable.
- Mount with the lowest moving parts at least 8.2ft(2.5m) above the floor or grade level. (If applicable)
- The manufacturer does not assume responsibility for accidents or injury caused by an incorrectly installed air conditioner. If you are unsure about installation, contact an installation specialist.
- When installing the built-in type air conditioner, keep all electrical cables such as the power cable and the connection cord in pipe, ducts, cable channels e.t.c to protect them against liquids, outside impacts and so on.

POWER SUPPLY LINE, FUSE OR CIRCUIT BREAKER

- If the power cord of this air conditioner is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- The unit must be plugged into an independent circuit if applicable or connect the power cable to the auxiliary circuit breaker. An all pole disconnection from the power supply must be incorporated in the fixed wiring with a contact opening of >3mm.
- Do not use an extension cord with this product.
- If the unit is equipped with a power supply cord and a plug, the plug must be accessible after installation.
- This appliance must be installed accordance with the national wiring regulations.

Contents



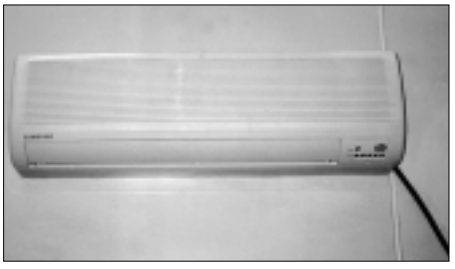
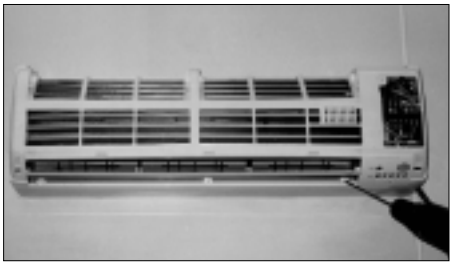
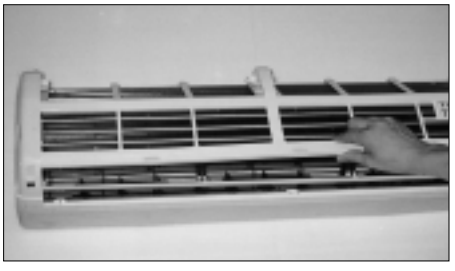
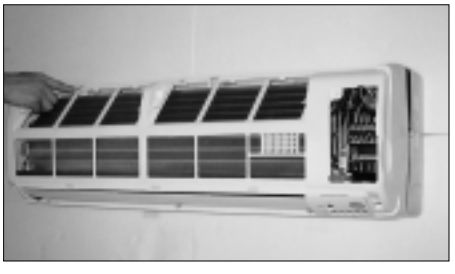
SPLIT TYPE
AIR CONDITIONER

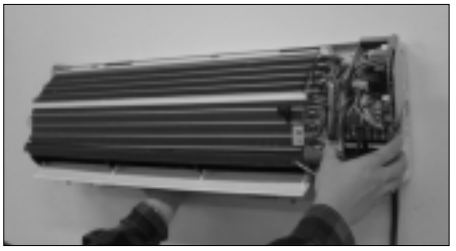
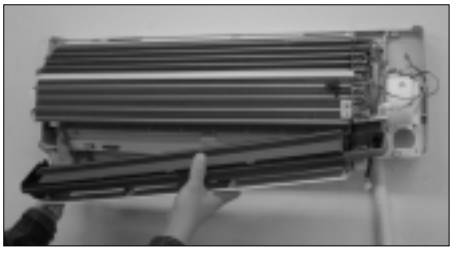
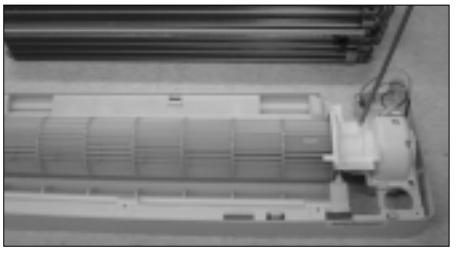
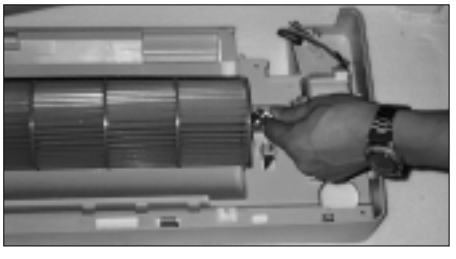
I Disassemble and reassemble

Stop operation of the air conditioner and remove the power cable before repairing the unit.

1 Indoor unit

If you disassemble the heat exchanger, you must pump down at first.

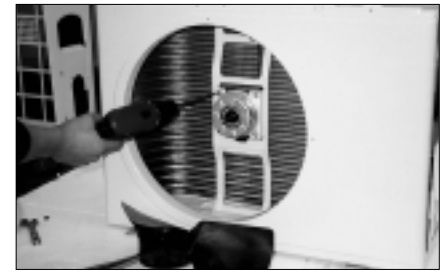
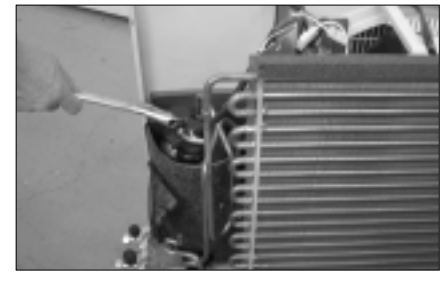
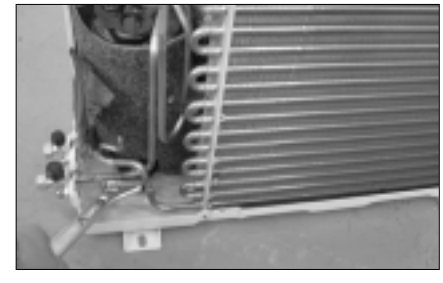
No.	Part	Procedure	Remark
1	Front Panel	1) Stop the operation of the air conditioner and block the main power. 2) Separate the tape from the front panel.	
		3) Contract the second finger to the left, and right handle. And pull the inlet grille to open. 4) Take the left and right filter out. *Taking off the deodorizing filter. 5) Loosen one of the right screw and separate the terminal cover.	
		6) Loosen three screws of front panel.	
		7) Pull the upper left, center and right of discharge softly so that the outside cover is pulled out.	
		8) Pull softly the lower part of discharge and push it up. ⚠ **Caution** Assemble the front panel and fix the hooks of left, center and right.	

No.	Part	Procedure	Remark
2	Electrical Parts (Main PCB)	1) Take all the connector of PCB on the upper part. (Included Power cord) 2) Separate the outdoor unit connection wire from the terminal block. 3) If you pull out the main PCB up, it will be taken out.	
3	Assembly Tray Drain	1) Separate the drain hose from the extension drain hose. 2) Pull tray drain out from the back body.	
4	Heat Exchanger	1) Loosen two ground screws at the right side. 2) Separate the connection pipe. 3) Separate the holder pipe at the rear side. 4) Loosen three screws at the right and left side. 5) Lift the heat exchanger up a little to push the upper side to separate it from the indoor unit.	 
5	Fan Motor and Cross Fan	1) Loosen two screws and separate the motor holder. 2) Loosen the screw of fan motor. (By use of M3 wrench) 3) Separate the fan motor from the fan. 4) Separate the fan from the left holder bearing.	 

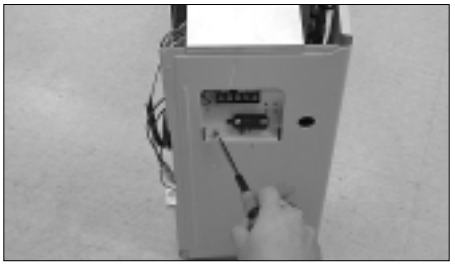
2 Outdoor unit

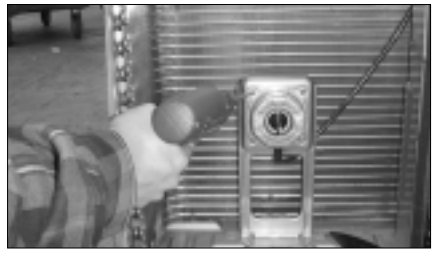
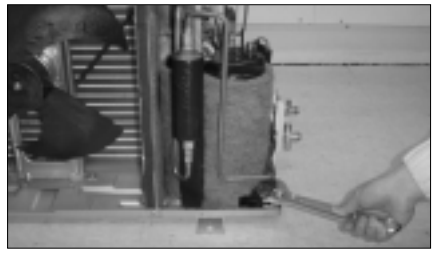
■ US07A5(6)MA/US09A5(6)MAF

No.	Part	Procedure	Remark
1	Common Work	1) Loosen screws and separate the cover E-part. 2) Separate the connection wire from the terminal block.	
		3) Loosen five screws and separate the upper cabinet.	
		4) Loosen the screw of the control box.	
		5) Loosen nine screws and separate the side cabinet.	
2	Fan Motor	1) Loosen four screws and separate Guard Fan from the front cabinet.	

No.	Part	Procedure	Remark
		2) Remove the nut flange (Turn to the clockwise). 3) Separate the fan. 4) Loosen four screws to separate the motor.	 
3	Heat Exchanger	1) Release the refrigerant. 2) Loosen two screws of left and right side. 3) Disassemble the inlet and outlet pipe by welding. 4) Separate the heat exchanger.	
4	Compressor	1) Release the refrigerant. 2) Loosen the nut on the terminal cover and open the terminal cover. 3) Separate the OLP and the compressor wire. 4) Disassemble the inlet and outlet pipe of compressor by welding. 5) Disassemble the inlet and outlet pipe of condenser by welding. 6) Loosen three bolts of the lower part. 7) Separate the compressor.	 

■ US12AA(B)MCF

No.	Part	Procedure	Remark
1	Common Work	1) Loosen a screw and separate the cover E-part. 2) Separate the connection wire from the terminal block. 3) Loosen thirteen screws and separate the front cabinet. 4) Loosen a screw of the control box. 5) Loosen four screws and separate the side cabinet.	   

No.	Part	Procedure	Remark
2	Fan and Motor	1) Remove the nut flange (Turn to the clockwise). 2) Separate the fan. 3) Loosen four screws to separate the motor.	 
3	Heat Exchanger	1) Release the refrigerant. 2) Loosen screws of left and right side. 3) Disassemble the inlet and outlet pipe by welding. 4) Separate the heat exchanger.	
4	Compressor	1) Release the refrigerant. 2) Open the terminal cover of compressor and unscrew the connection terminal. 3) Separate the OLP and the compressor wire. 4) Disassemble the inlet and outlet pipe of compressor by welding. 5) Loosen three bolts of the lower part. 6) Separate the compressor.	 

Ⅱ Set up the option code

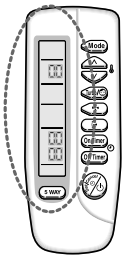
The method for setting up the model option with the remote control

◆ **It is necessary to set up option codes after replacing the main PCB with service parts.**

Make sure that you can set up option codes of the remote control after replacing the main PBA. Otherwise, the unit won't be working properly and all LED lamps on display will be flickering.

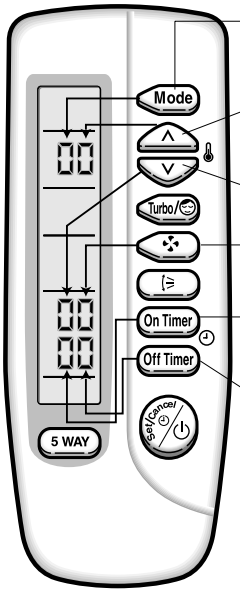
Step 1 **Preparing for the remote control to the main PCB option set.**

1. Remove the battery from the remote control.
2. Press the temperature button simultaneously and insert the battery again.
3. Make sure the remote control display shown as 00 00 00 .



Step 2 **Preparing for the remote control option set.**

> ***Note*** ***In case that the wrong letter has been selected; continue to press the button until the correct letter appears.***
>
> 1. If the number "0"appears on the display, proceed to the second stage.
> 2. Every time you press the **1)** and **7)** button, "0" and "1" continue to appear.
> 3. Every time you press the **2)**, **3)**, **4)**, **5)**, **6)**, **8)**, **9)**, **10)**, **11)**, **12)** button, the number increases from 0 ~ 9 (0, 1, 2, 3, 4, 5, 6, 7, 8, 9) and A, b, c, d, E, F in order.



1) If the first number is 0, it is correct. Otherwise, press the Mode button until 0 appears.

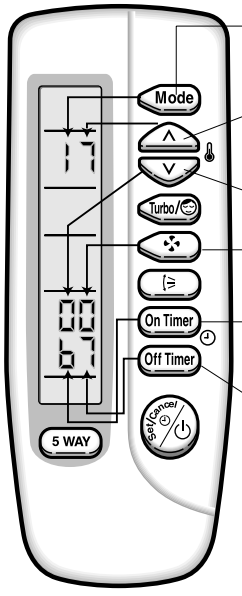
2) When pressing the ∧ button 0 ~ F on the display, select one of them.

3) When pressing the ∨ button 0 ~ F on the display, select one of them.

4) When pressing the Turbo/ button 0 ~ F on the display, select one of them.

5) When pressing the On Timer button 0 ~ F on the display, select one of them.

6) When pressing the Off Timer button 0 ~ F on the display, select one of them.



7) If the first number is 1, it is correct. Otherwise, press the Mode button until 1 appears.

8) When pressing the ∧ button 0 ~ F on the display, select one of them.

9) When pressing the ∨ button 0 ~ F on the display, select one of them.

10) When pressing the fan button 0 ~ F on the display, select one of them.

11) When pressing the On Timer button 0 ~ F on the display, select one of them.

12) When pressing the Off Timer button 0 ~ F on the display, select one of them.

Step 3 Reconfirming the option set after completing

Example : 000000-1700b7

Press the Mode button for the " 0 " mode and the display will be shown as 00 00 00.
Press the Mode button for the " 1 " mode and the display will be shown as 17 00 b7.

Step 4 Pressing the (On/Off) button

When pressing the (On/Off)button in the direction of the remote control for unit, it sounds beep or ringing and the first LED lamp on the left side is flickering at the same time, then the input option is completed. If it doesn't sound ringing, try again by pressing the (On/Off)button.

Step 5 Testing the unit

1 Remove the battery from the remote control.
2. Insert the battery into the remote control.
3. Press the (On/Off)button in the direction of the remote control for set.

Note

Error mode

1. If all lamps of the indoor units are flickering, plug out and in again and press the (On/Off) button again.
2. If the unit doesn't work properly or all lamps are continuously flickering after setting the option code, check that the option code is set properly for its own model.

Ⅱ Set up the option code(cont'd)

A table of the option code

Model	Option code
AS07A5MA	010000-1700b7
AS07A6MA	000000-1700b7
AS09A5MAF	010000-1700Fb
AS09A6MAF	000000-1700Fb
AS12AAMCF	010000-170340
AS12ABMCF	000000-170340

Ⅲ Troubleshooting

1 Items to be checked first

1) The input voltage should be voltage rating within ±10% range.
   The air conditioner may not operate properly if the voltage is out of this range.

2) Is the connection cable linking the indoor unit and the outdoor unit properly?
   The indoor unit and the outdoor unit shall be linked by five cables.
   Check the terminals if the indoor unit and outdoor unit are properly linked by the same number of cables.
   Otherwise the air conditioner may not operate properly.

3) When a problem occurs due to the contents illustrated in the table below, it is not a symptom related to the malfunction of the air conditioner.

No.	Operation of air conditioner	Explanation
1	The STD operation indicator, LED blinks when a power plug of the indoor unit is plugged in at first.	It indicates power is on. The LED stops blinking if the On/Off button on the remote control is pushed.
2	In the Cool mode, the compressor does not operate at a room temperature higher than the setting temperature while the indoor fan operates.	It happens after three minutes when the compressor is reoperated. The same phenomenon occurs when a power is on. As a phenomenon that the compressor is reoperated after three minutes, the indoor fan is adjusted automatically with reference to a temperature of the air.
3	The Fan speed operating is not allowed in the Auto or Dry mode.	The speed of the indoor fan is set to LL in the Dry mode. The Fan speed is five steps are selected automatically in the Auto mode.
4	Compressor stops operating intermittently in the Dry mode.	The compressor is controlled automatically in the Dry mode depending on the room temperature and humidity.
5	Timer LED of the indoor unit lights up and the air conditioner does not operate.	The timer is being activated and the unit is in the ready mode. The unit operates normally if the timer operation is cancelled.
6	The compressor stops intermittently in the Cool or Dry mode, and the fan speed of the indoor unit decreases.	The compressor stops intermittently or the fan speed of the indoor unit decreases to prevent inside/outside air from freezing depending on the inside/outside air temperature.

4) Indoor unit observes operation condition of the air conditioner and displays self diagnosis on the display panel.

No.	Display	Self Diagnosis
1	STD LED blinking (1Hz)	Restore from power failure (input initial power)
2	TIMER LED blinking (1Hz)	Indoor unit Room sensor Error (open or short)
3	STD and TIMER LED blinking (1Hz)	Indoor unit heat exchanger temperature sensor Error (open or short)
4	NATURE LED blinking (1Hz)	Indoor fan malfunctioning (for speed is below 450rpm)
5	All LED blinking (1Hz)	Option Error

2 Abnormal diagnosis by symptom

1. No Power - Initial diagnosis

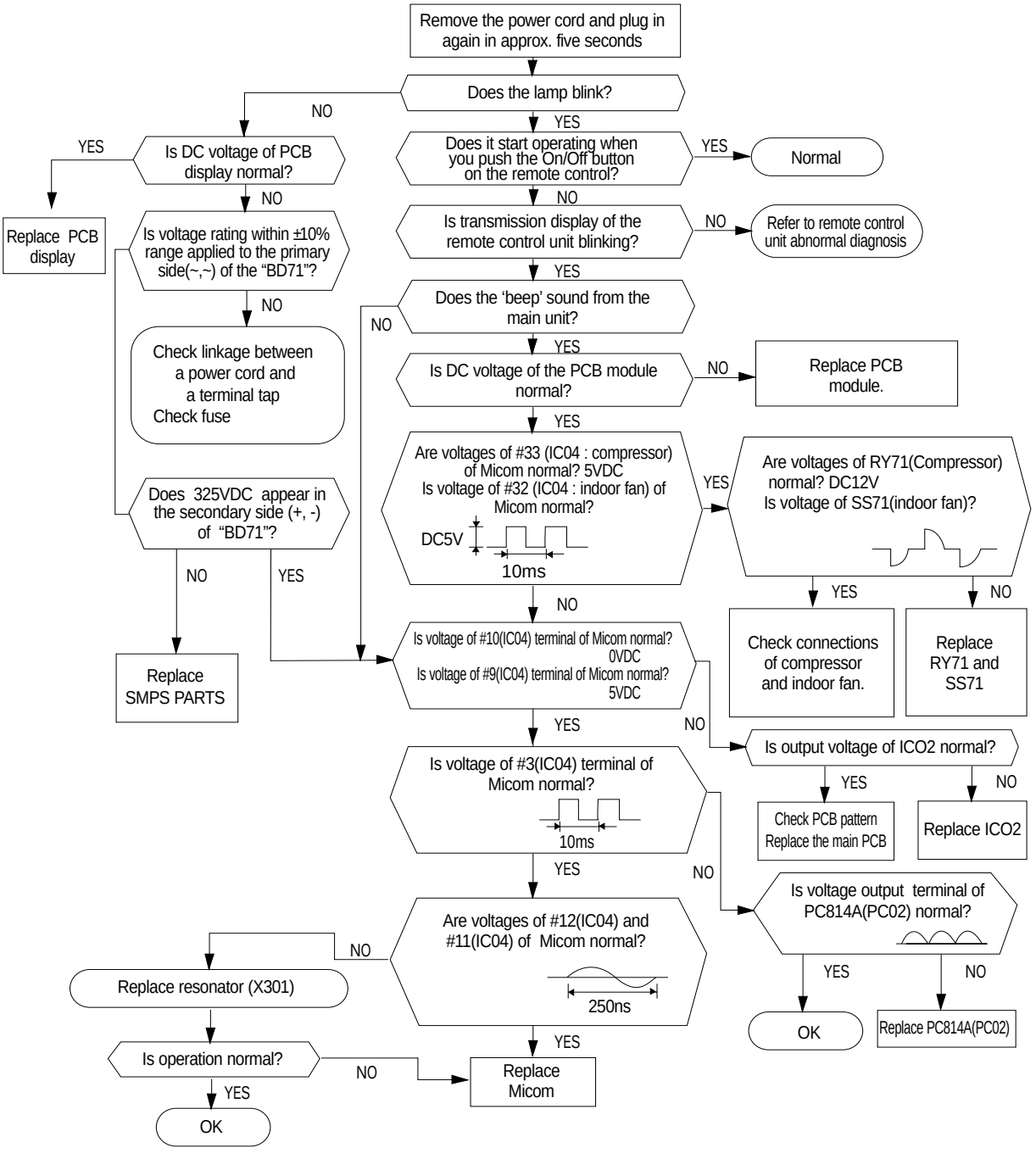
1) Checklist :

(1) Is input voltage normal?

(2) Is AC power linked correctly?

(3) Is output voltage of DC regulator IC KA78L05 (IC02) normal? (4.5VDC-5.5VDC)

2) Troubleshooting procedure



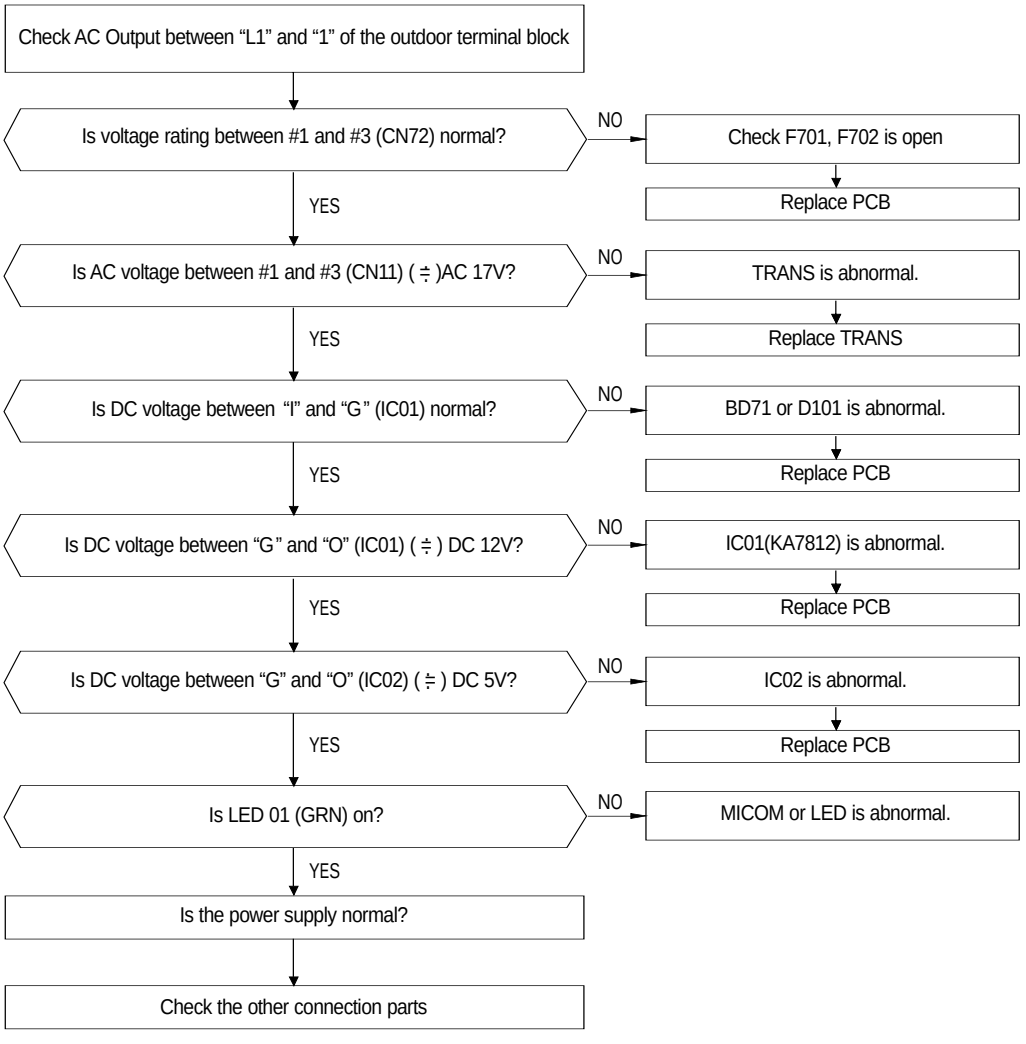
1-1 No Power-Initial diagnosis in case of the Outdoor Unit PCB of US12AA(B)MCF

1) Checklist :

(1) Is AC voltage between “L1” and “1” of outdoor terminal block is normal?
(Input voltage within ±10% range)
If the Output is not checked, check “L1” and “1” of Indoor Terminal Block.

(2) Are connectors linked correctly to the outdoor PCB?
(CN71, CN76, CN72, CN11)

2) Troubleshooting procedure

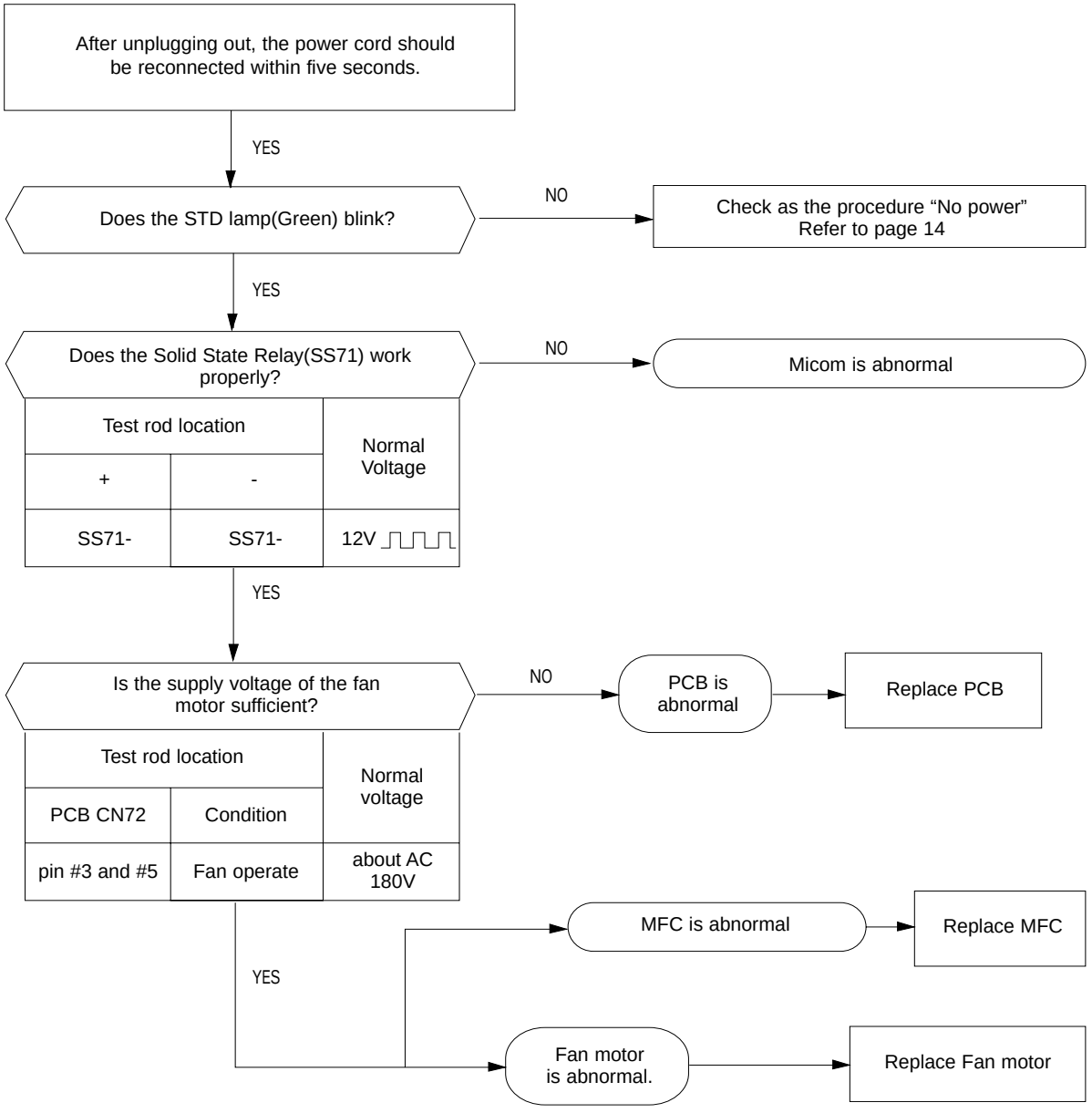


2. When the Indoor Unit Fan Does Not Operate - Initial Diagnosis

1) Checklist :

(1) Is the indoor unit fan motor properly connected with the connector (CN72)?
(2) Is the AC voltage correct?
(3) Is HALL IC in the indoor fan motor properly connected with the connector (CN42)?
(4) Is the running capacitor (CR71) properly connected with PCB board?

2) Troubleshooting procedure



3. When the Outdoor Unit Does Not Operate - Initial Diagnosis

3-1 US07A5(6)MA / US09A5(6)MAF

1) Checklist :

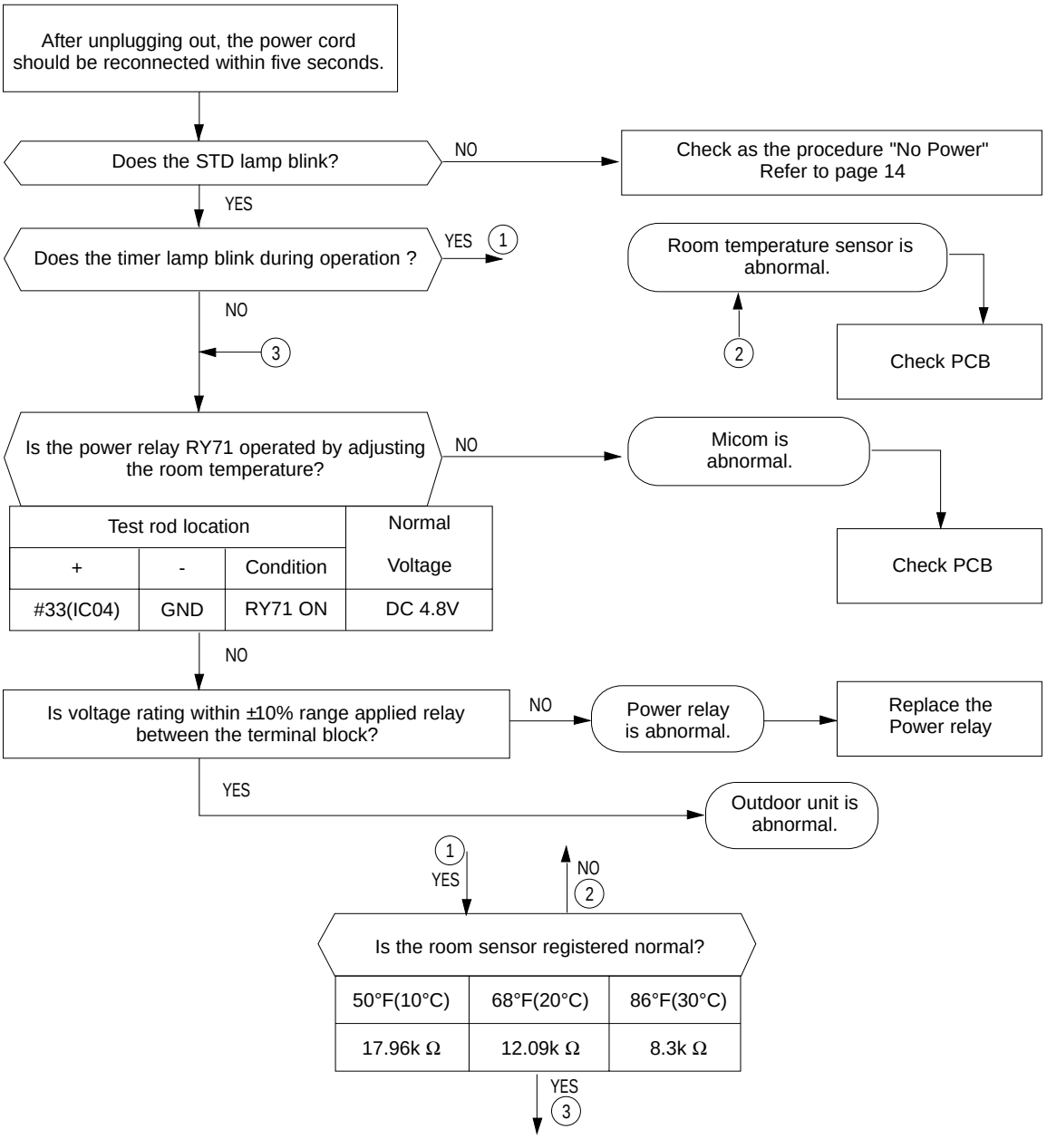
(1) Is input voltage normal?

(2) Is the set temperature of the remote control higher than room temperature in the Cool mode?

(3) Is the POWER IN connector (CN71) linked correctly?

(4) Is the outdoor unit properly connected with the terminal block connector?

2) Troubleshooting procedure



Test rod location			Normal
+	-	Condition	Voltage
#33(IC04)	GND	RY71 ON	DC 4.8V

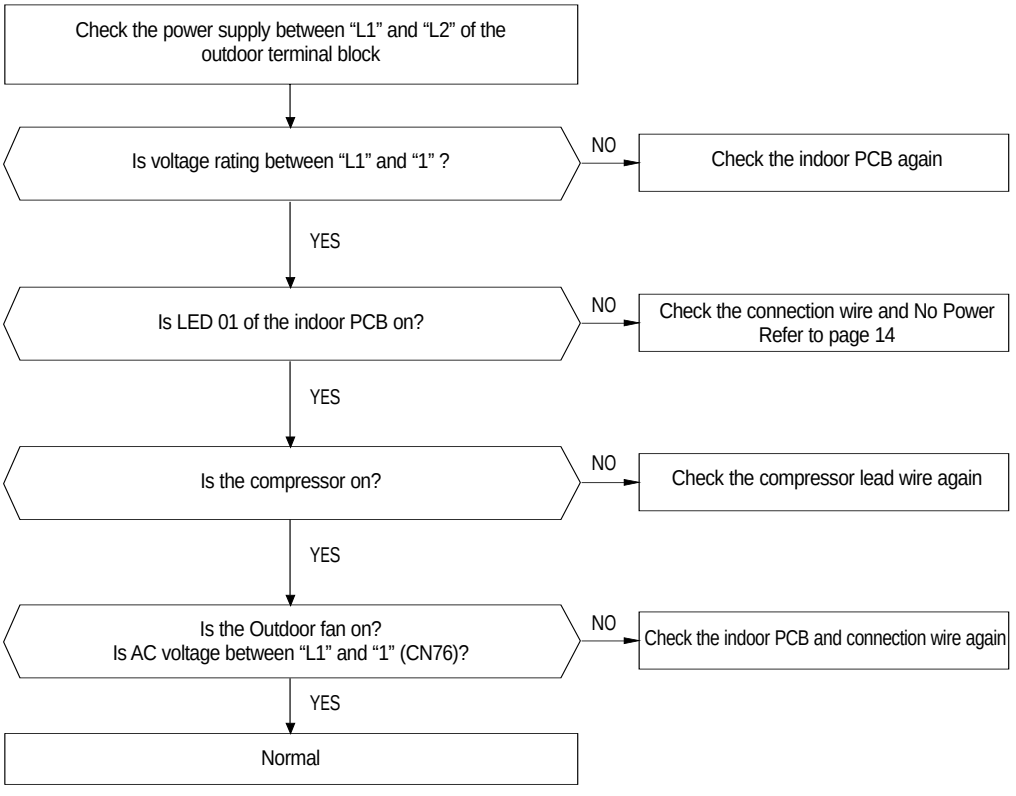
3-2 US12AA(B)MCF

1) Checklist :

(1) Is LED 01(GRN) on?

(2) Are all connectors linked correctly?

2) Troubleshooting procedure



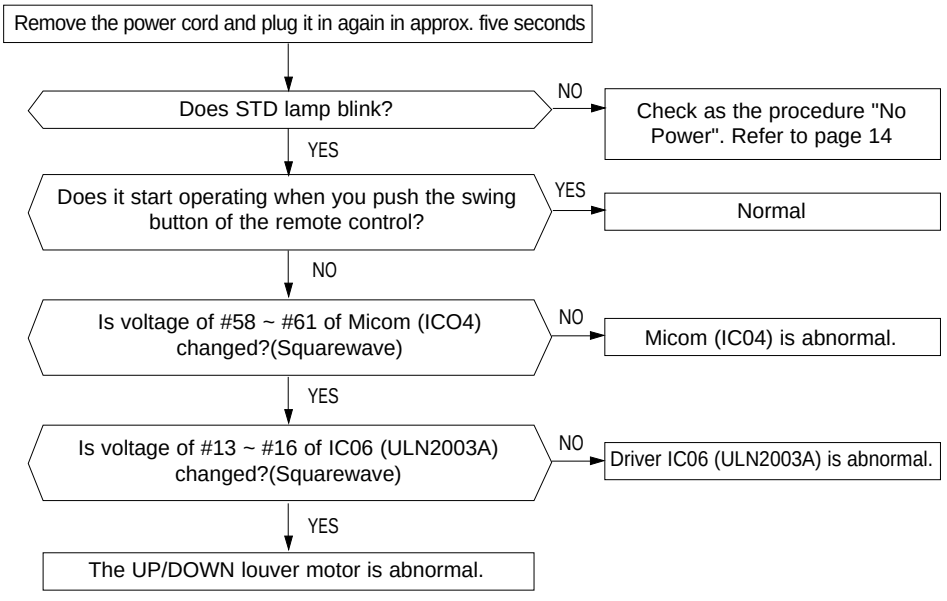
4. When the UP/DOWN Louver Motor Does Not Operate - Initial Diagnosis

1) Checklist :

(1) Is input voltage normal?

(2) Is the UP/DOWN louver motor properly connected with the connector (CN61)?

2) Troubleshooting procedure



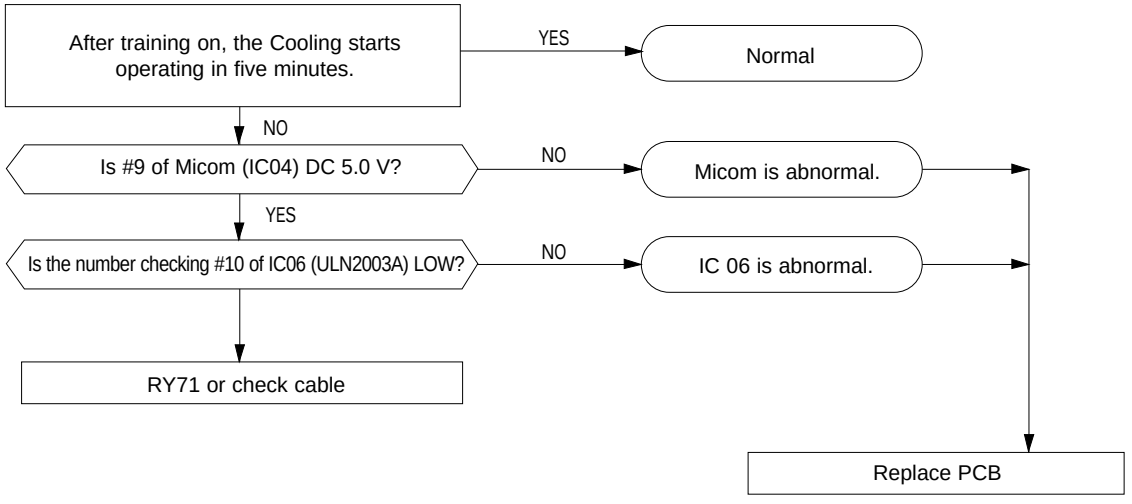
5. When there is no cool air in the current mode

1) Checklist :

(1) Is the set temperature of the remote control lower than room temperature in the Cool mode?

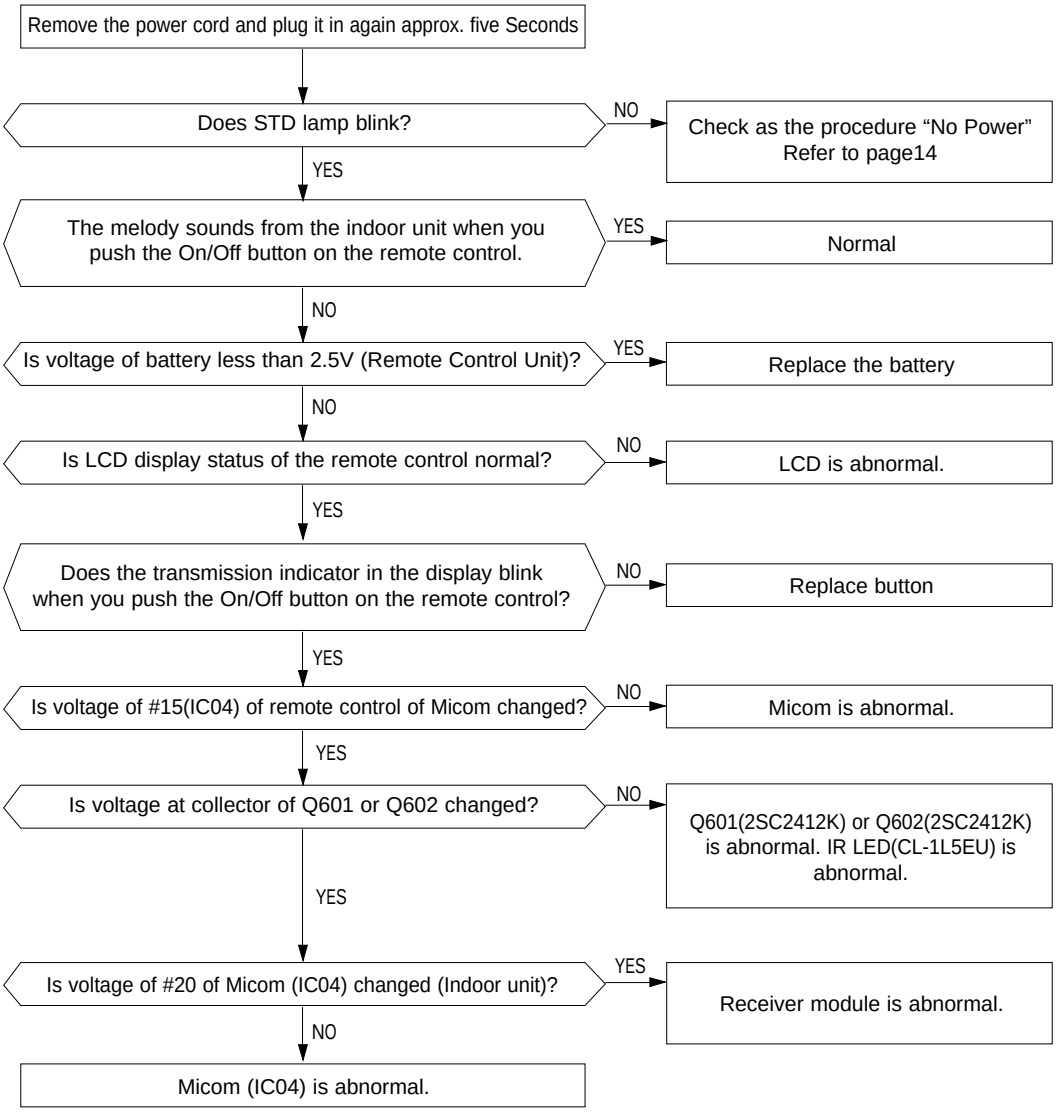
(2) Is the Indoor PCB properly connected with the CN71 connector?

2) Troubleshooting procedure

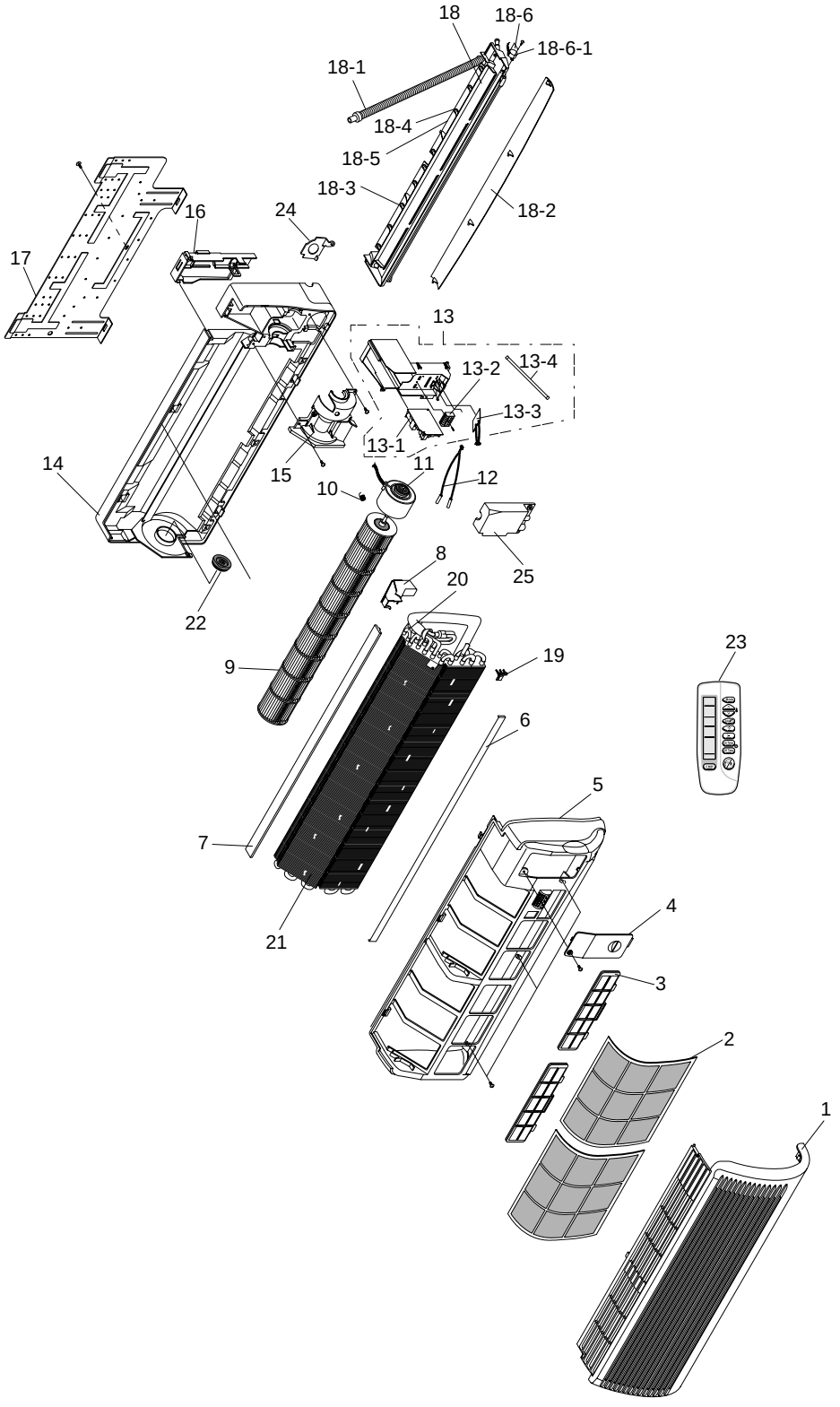


6. When the remote control does not operate

1) Troubleshooting procedure



1 Indoor unit

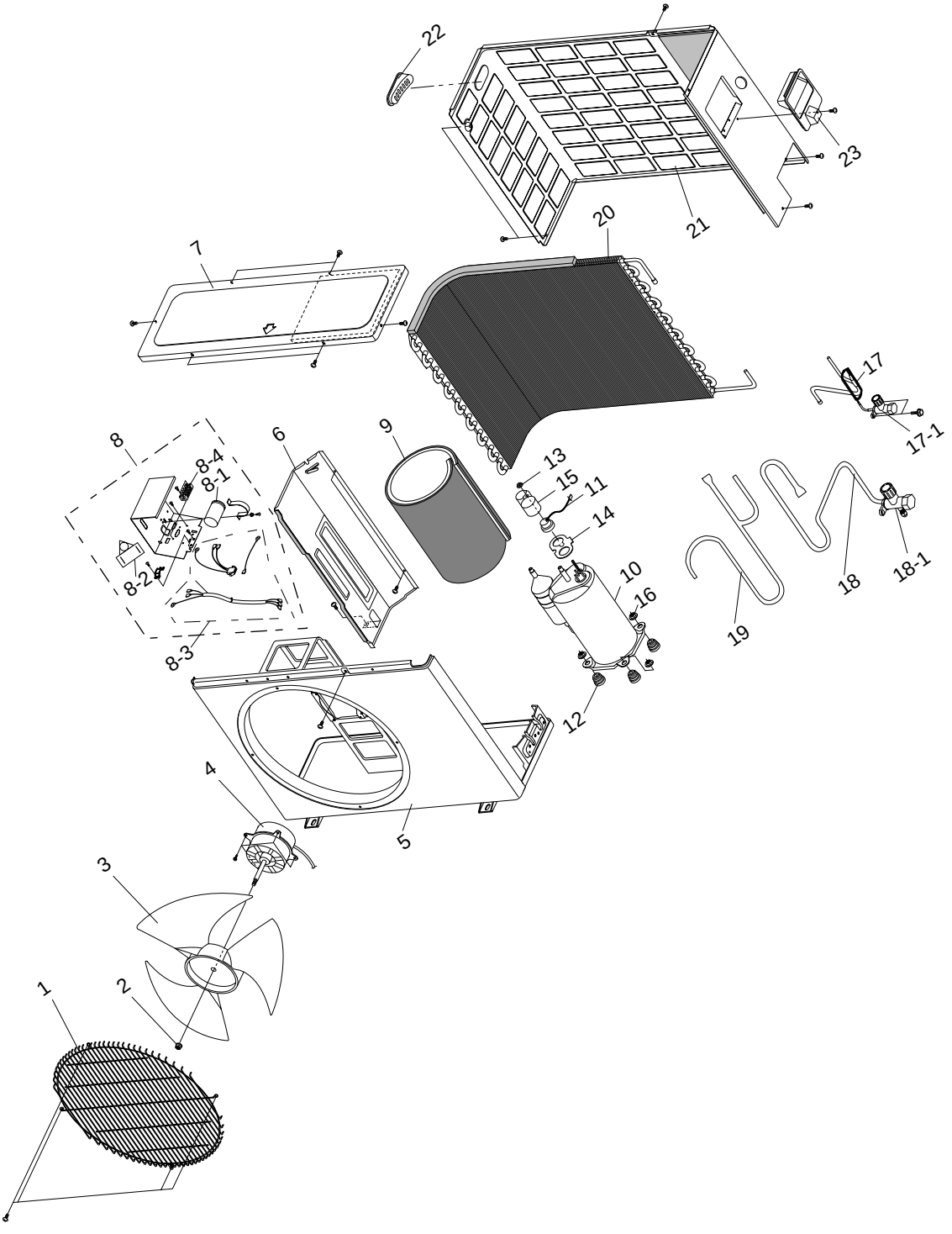


■ Part's List

No.	Code No.	Description	Q'TY			Remark
			AS07A5(6)MA	AS09A5(6)MAF	AS12AA(B)MCF	
1	DB64-00085A	GRILLE-AIR INLET	1	1	1	
2	DB63-00064B	GUARD-AIR FILTER	1	1	1	
3	DB95-00287K	FILTER CLEANER ASS´Y	1	1	1	
4	DB63-00067A	COVER TERMINAL	1	1	1	
5	DB92-00031L	ASS´Y PANEL-FRONT	1	1	1	
6	DB67-00051A	SPACER EVAP LOW	1	1	1	
7	DB67-00032A	SPACER EVAP UP	1	1	1	
8	DB63-00083A	COVER U BEND	1	1	1	
9	DB94-00020D	ASS´Y CROSS FAN	1	1	1	
10	DB60-20011A	BOLT SPECIAL	1	1	1	
11	DB31-00071A	MOTOR FAN IN	1	1	-	
	DB31-00071B	MOTOR FAN IN	-	-	1	
12	DB32-00020A	THERMISTOR WIRE ASS´Y	1	1	1	
13	DB93-00458B	ASS´Y CONTROL IN	1	1	-	
	DB93-00458H	ASS´Y CONTROL IN	-	-	1	
13-1	DB93-01018B	ASS´Y PCB MAIN	1	1	-	
	DB93-01018A	ASS´Y PCB MAIN	-	-	1	
13-2	DB65-00079B	TERMINAL BLOCK ASS´Y	1	1	1	
13-3	DB93-00268A	ASS´Y PCB DISPLAY	1	1	1	
13-4	DB39-00147A	CONNECT WIRE PCB	1	1	1	
14	DB94-00377C	ASS´Y BACK BODY	1	1	-	
	DB94-00377D	ASS´Y BACK BODY	-	-	1	
15	DB61-00162A	HOLDER MOTOR	1	1	1	
16	DB61-00165A	HOLDER PIPE	1	1	1	
17	DB70-00214A	PLATE HANGER	1	1	1	
18	DB94-00376A	ASS´Y TRAY DRAIN	1	1	1	
18-1	DB94-00062E	ASS´Y DRAIN HOSE	1	1	1	
18-2	DB66-00127B	BLADE H	1	1	1	
18-3	DB66-00128A	BLADE V,A	1	1	1	
18-4	DB66-00128B	BLADE V,B	1	1	1	
18-5	DB63-00082A	SCREEN SAFETY WIRE	1	1	1	
18-6	DB95-20138A	ASS´Y MOTOR STEPPING	1	1	1	
18-6-1	DB31-10129A	MOTOR STEPPING	1	1	1	
19	DB61-40251A	HOLDER SENSOR	1	1	1	
20	DB67-60030A	SPRING SENSOR	1	1	1	
21	DB96-01247B	ASS'Y CYCLE IN	1	1	-	
	DB96-01443A	ASS'Y CYCLE IN	-	-	1	
22	DB94-40003A	RUBBER BEARING	1	1	1	
23	DB93-00861A	ASS´Y REMOCON	1	1	1	
24	DB70-00114A	PLATE-KNOCKOUT	1	1	1	
25	DB63-00226A	COVER TERMINAL BLOCK	1	1	1	

2 Outdoor unit

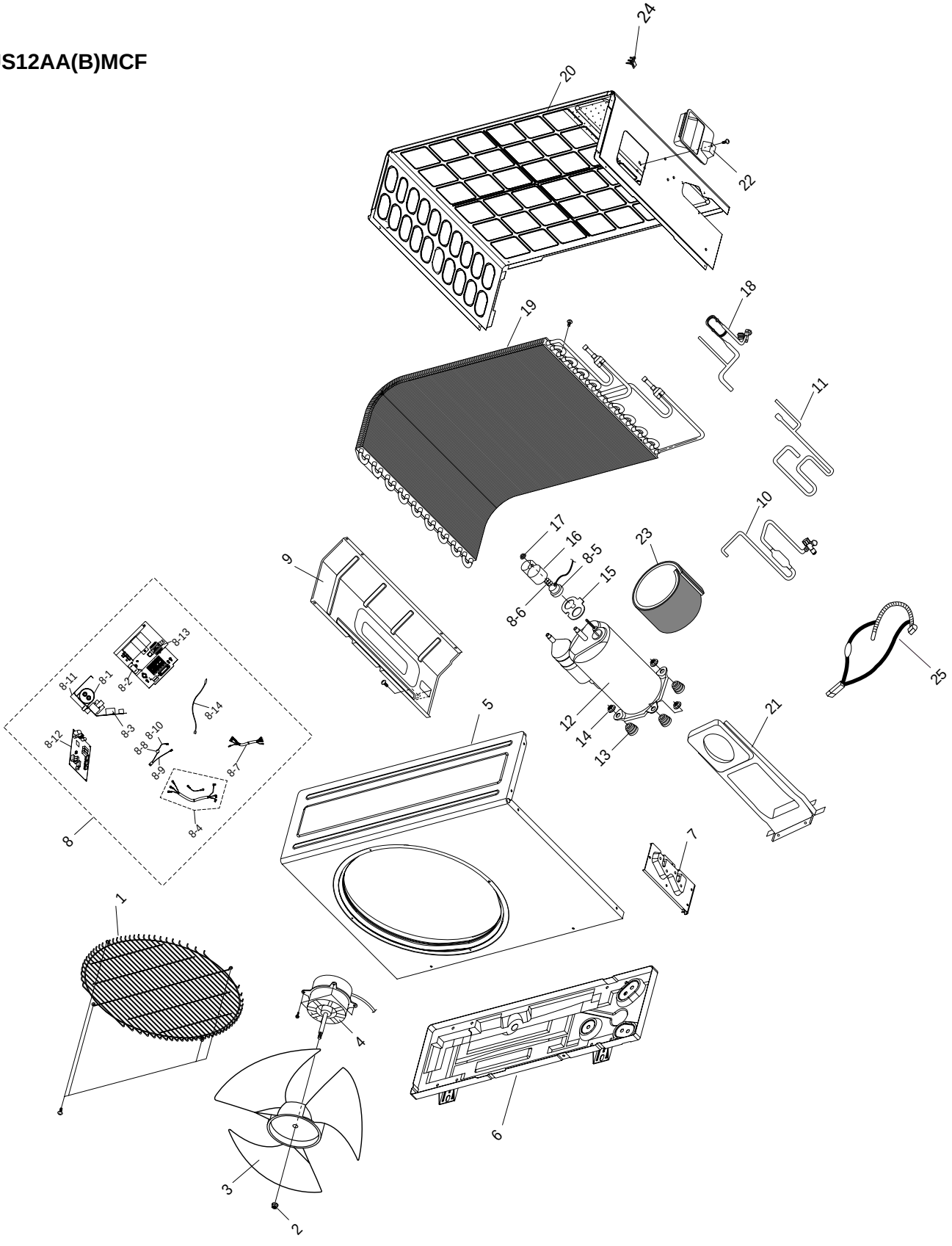
■ US07A5(6)MA/US09A5(6)MAF



■ Part's List

No.	Code No.	Description	Specification	Q'TY	
				US07A5(6)MA	US09A5(6)MAF
1	DB63-00086B	GUARD-FAN	HSWR, IP2, 5&3, SC-90073T,375FAN	1	1
2	DB60-30004A	NUT-FLANGE	2C, M6, SM20C, NTR	1	1
3	DB67-00036A	FAN-PROPELLER	AS+G/F20%, PI 375, BLK	1	1
4	DB31-10058G	MOTOR-FAN OUT	ASS020ZREA, FAN OUT,115V/60Hz	1	1
5	DB90-00264G	ASS´Y FRAME (PAINT)	ASS'Y	1	1
6	DB94-00078A	ASS´Y PARTITION	ASS´Y 620mm COND	1	1
7	DB90-00077B	ASS´Y CABI-UPPER	ASS´Y	1	1
8	DB93-00424Q	ASS´Y CONTROL OUT	ASS´Y	1	-
	DB93-00424R	ASS´Y CONTROL OUT	ASS´Y	-	1
8-1	2501-001226	C-OIL (COMP)	25µF, 370VAC	1	-
	2501-001230	C-OIL (COMP)	45µF, 370VAC	-	1
8-2	2301-001379	C-OIL (MOTOR)	4.0µF, 450VAC	1	1
8-3	DB33-00423A	ASS´Y LEAD WIRE	V2 P/D (105˚C)	1	1
8-4	DB65-40074B	TERMINAL BLOCK	5P, L1, L2, 1, 2, 3	1	1
9	DB72-00453A	CLOTH-COMP	T8, 425, 225, 44F COMP	1	1
10	44A072HW1EB	ROTARY COMP	1Ph, 115V/60Hz	1	-
	44B098HX1EF	ROTARY COMP	1Ph, 115V/60Hz	-	1
11	DB47-20001V	PROTECTOR O/L	MRA98706-12008	1	-
	DB35-00011D	PROTECTOR O/L	MRA12132-12007	-	1
12	DB73-00070A	GROMMET-ISOLATOR	NR	3	3
13	DB60-30018A	NUT-FLANGE	PI0.8, M5, SM20C	1	1
14	DB63-20002A	GASKET	EPDM, TO.8	1	1
15	DB63-10165D	COVER-TERMINAL	PBT	1	1
16	DB60-30028A	NUT-WASHER	HEX, 2C, M8, ZPC	3	3
17	DB96-00553B	ASS´Y TUBE CAPILLARY	ID1.42 x 800+1/4 inch	1	-
	DB96-00553A	ASS´Y TUBE CAPILLARY	ID1.5 x 900+1/4 inch	-	1
17-1	DB62-00254B	VALVE-SERVICE	1/4 inch	1	1
18	DB96-00615A	ASS'Y TUBE SUCTION	ASS´Y	1	-
	DB96-03291A	ASS´Y TUBE -SUCTION	ASS´Y	-	1
18-1	DB62-40073B	VALVE-SERVICE	3/8 inch	1	1
19	DB96-00616A	ASS´Y TUBE DISCHARGE	ASS´Y	1	-
	DB96-03290A	ASS´Y TUBE -DISCHARGE	ASS´Y	-	1
20	DB96-01911A	ASS´Y COND	1.7D-FIN, 620mm	1	1
21	DB64-60171D	CABINET-SIDE	SECC-P, T 0.8	1	1
22	DB67-00091A	HANDLE-CABI LF	PP	1	1
23	DB63-10443C	COVER-E, PARTS ASS'Y	SC-90073R	1	1

■ **US12AA(B)MCF**


24
20
22
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8-5
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8-6
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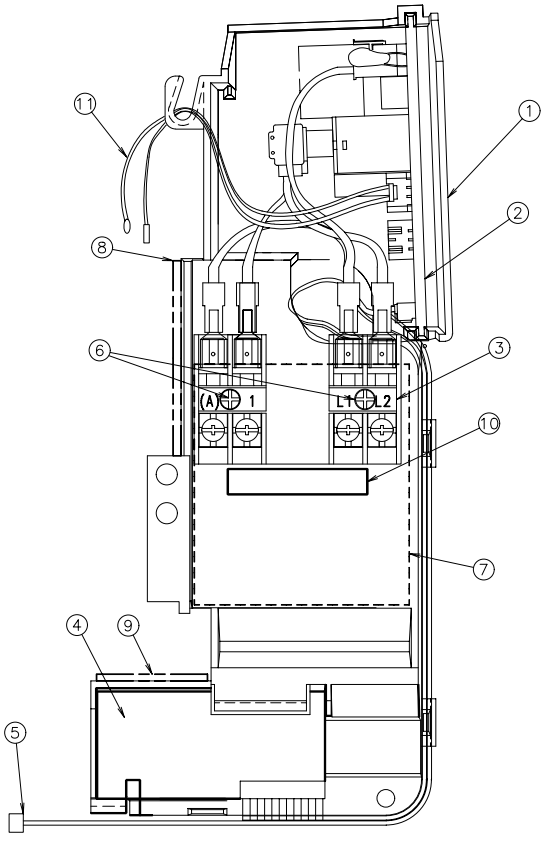
5
8-13
8-11
8-1
8-2
8-14
8-3
8-12
8-8
8-10
8-9
8-7
8-4
8
7
1
4
3
2
6

■ Part's List

No.	Code No.	Description	Specification	Q'TY	Remark
1	DB63-00385B	GUARD FAN	HSWR,OD 2.0	1	
2	DB60-30020A	NUT-FLANGE	2C SM20C M6 NTR	1	
3	DB67-50063A	FAN-PROPELLER	AS+G/F, D405	1	
4	DB31-00242A	MOTOR-FAN OUT	220/240V,60/50HZ	1	
5	DB90-00633N	ASS'Y CABI-FRONT	ASS'Y	1	
6	DB90-00687D	ASS'Y BASE OUT	ASS'Y	1	
7	DB61-00887A	BRACKET-VALVE	SECC-P	1	
8	DB93-02588A	ASS'Y CONTROL OUT	ASS'Y	1	
8-1	2501-001237	CAPACITOR COMP	35uF 450VAC	1	
8-2	2301-001375	CAPACITOR MOTOR	1.5uF 450VAC	1	
8-3	DB65-40074B	TERMINAL-BLOCK	5P DFT-20A	1	
8-4	DB93-00423B	ASS'Y LEAD WIRE	ASS'Y	1	
8-5	DB35-00015H	OLP	RAC12074-9622	1	
8-6	DB67-60020A	SPRING OLP	STS304	1	
8-7	DB93-02618B	ASS'Y CONNECT WIRE	ASS'Y	1	
8-8	DB32-00007A	THERMOSTAT-ASS'Y	ASS'Y	1	
8-9	DB39-00530A	CONNECT WIRE-THERMOSTAT, B	ASS'Y	1	
8-10	DB39-20290H	CONNECT WIRE-THERMOSTAT A	AWM1015 AWG#18	1	
8-11	DB61-01769A	HOLDER PCB	ABS	1	
8-12	DB93-02576A	ASS'Y MAIN PCB OUT	ASS'Y	1	
8-13	DB26-10063B	TRANS POWER	-	1	
8-14	DB32-10051H	THERMISTOR-ASS'Y	2P, 103AT/DKS-103HW	1	
9	DB94-00163C	ASS'Y PARTITION	ASS'Y	1	
10	DB96-03140A	ASS'Y TUBE-SUCTION	ASS'Y	1	
11	DB62-01249A	TUBE DISCHARGE	ASS'Y	1	
12	48D135IU1EL	COMPRESSOR	208-230V/60H	1	
13	DB73-00067A	GROMMET ISOLATOR	NR	3	
14	DB60-30028A	NUT-WASHER	HEX 2C MB ZPC	3	
15	DB63-20002A	GASKET	EPDM	1	
16	DB63-10165D	COVER TERMINAL	PBT	1	
17	DB60-30018A	NUT-FLANGE	M5,SM20C	1	
18	DB96-01457J	ASS'Y TUBE CAPILLARY	ASS'Y	1	
19	DB96-01533A	ASS'Y COND-UNIT	ASS'Y	1	
20	DB90-00634B	ASS'Y CABI-SIDE	ASS'Y	1	
21	DB61-00802A	BRACKET MOTOR	SGCC-M	1	
22	DB63-10443C	COVER-E,PARTS ASS'Y	ABS	1	
23	DB63-00893A	CLOTH COMP SIDE	T10,580,255	1	
24	DB61-40251A	HOLDER SENSOR	PP	1	
25	DB95-00212B	ASS'Y HEATER	ASS'Y	1	

3 Assembly control in

■ AS07A5(6)MA/AS09A5(6)MAF/AS12AA(B)MCF

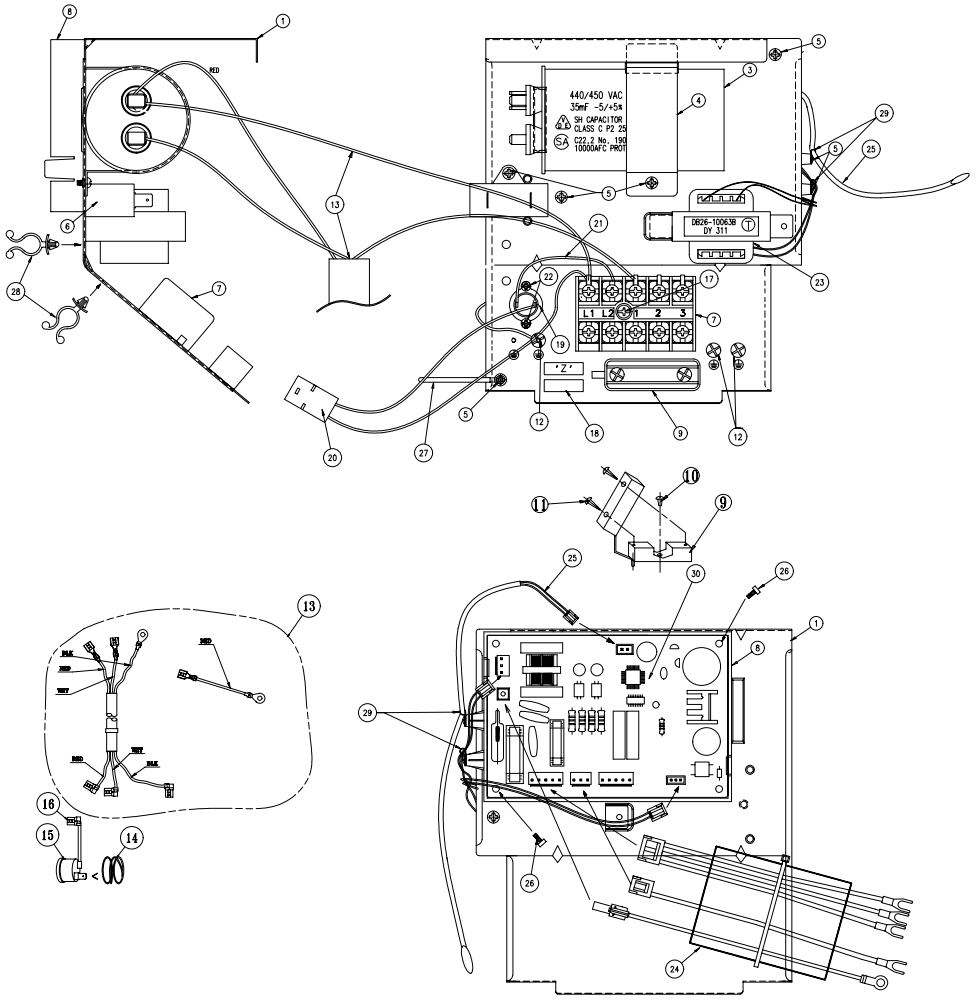


■ Part's List

No.	Description	Code No.		Remark
		AS07A5(6)MA / AS09A5(6)MAF	AS12AA(B)MCF	
1	HOLDER CONTROL	DB61-00160B	DB61-00160B	-
2	ASS'Y MAIN PCB	DB93-01018B	DB93-01018A	-
3	ASS'Y TERMINAL BLOCK	DB65-00079B	DB65-00079B	-
4	ASS'Y DISPLAY PCB	DB93-00268A	DB93-00268A	-
5	CONNECTOR WIRE PCB U/D	DB39-00147A	DB39-00147A	-
6	SCREW	-	-	SNA
7	HOLDER CLAMP IN	DB61-00219B	DB61-00219B	-
8	SEAL - PANEL FRONT RH	DB72-10191T	DB72-10191T	SNA
9	SEAL - H/CONTROL FRONT	DB62-02664A	DB62-02664A	SNA
10	LABEL	DB68-01975A	DB68-01975A	SNA
11	ASS'Y THERMISTOR	DB32-00020A	DB32-00020A	-

4 Assembly control out

■ US12AA(B)MCF

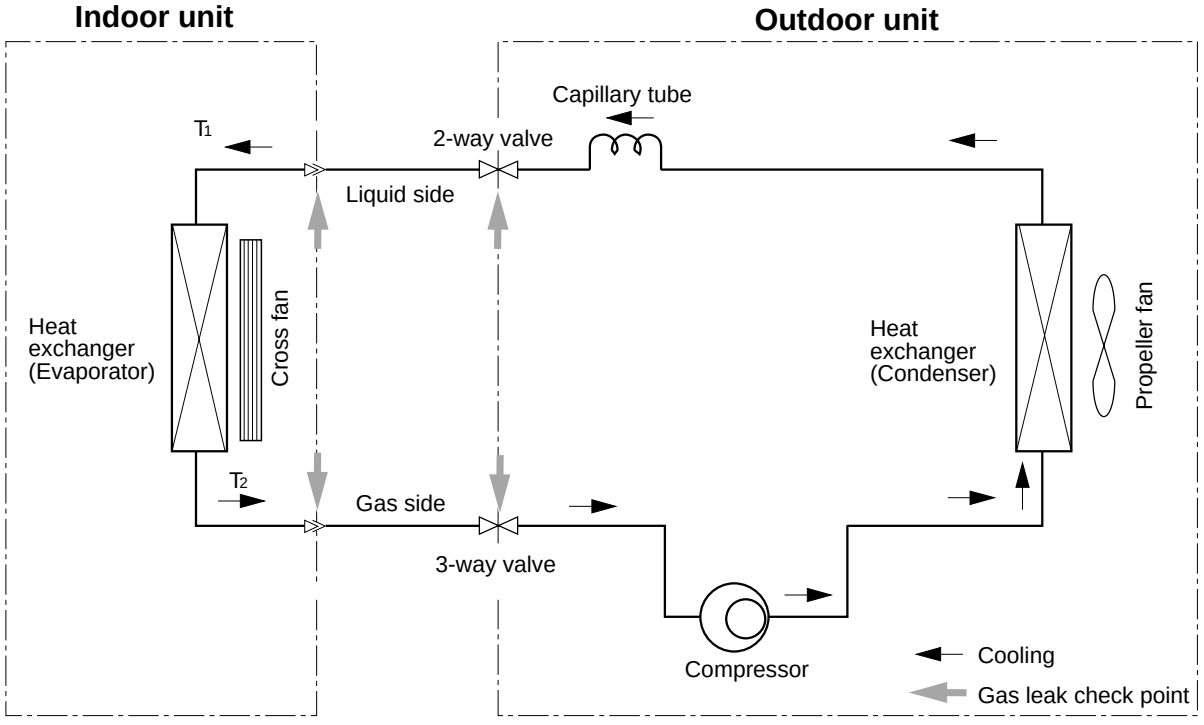


4 Assembly control out (cont'd)

■ Part's List

No.	Description	Specification	Remark
1	PLATE-CONTROL OUT	SGCC-M T0.6	-
3	C-OIL (CAPACITOR)	35uF/450VAC	-
4	CLIP-CAPACITOR	SGCC-MØ50	-
5	SCREW-TAPPING	2S-M4 x L10	SNA
6	C-OIL(CAPACITOR)	1.5uF/450VAC	-
7	TERMINAL-BLOCK	300V, 20A 5P	-
8	HOLDER PCB	ABS, BLK	-
9	HOLDER-WIRE	NYLON(BLK)	-
10	SCREW-TATITE	FH, M4 x L12	SNA
11	SCREW-TAPPING	TH, M4 x L16, ZPC(YEL)	SNA
12	SCREW-SPECIAL	M4 x 8	SNA
13	ASS'Y-LEAD, WIRE	ASS'Y	-
14	SPRING-O.L.P	STS304-WPA	-
15	O.L.P	RAC12074-9622	-
16	LEAD-WIRE C	SILICON GLASS	-
17	SCREW-TAPPING	PH, M4 x 25	SNA
18	LABEL-CAUTION	50 x 12	SNA
19	THERMOSTAT	PW-2N, ON/OFF:4/15	-
20	CONNECT-WIRE	WIRE ASS'Y	-
21	CONNECT-WIRE	WIRE	-
22	SCREW-TAPPING	PH, 2S, M3 x 8	SNA
23	TRANS	-	-
24	CONNECT-WIRE	ASS'Y	-
25	ASS'Y THERMISTOR	AWH126JE	-
26	SCREW-TAPPING	TH, +, 2S, M3 x 8	SNA
27	HOLDER WIRE	SGCC-M+PVC COATING	-
28	CLAMP WIRE	DAWH-5NB	-
29	CABEL-CLAMP	NYLON 66 / 3N	-
30	ASS'Y PCB MAIN OUT	ASS'Y	-

Refrigerating cycle block diagram

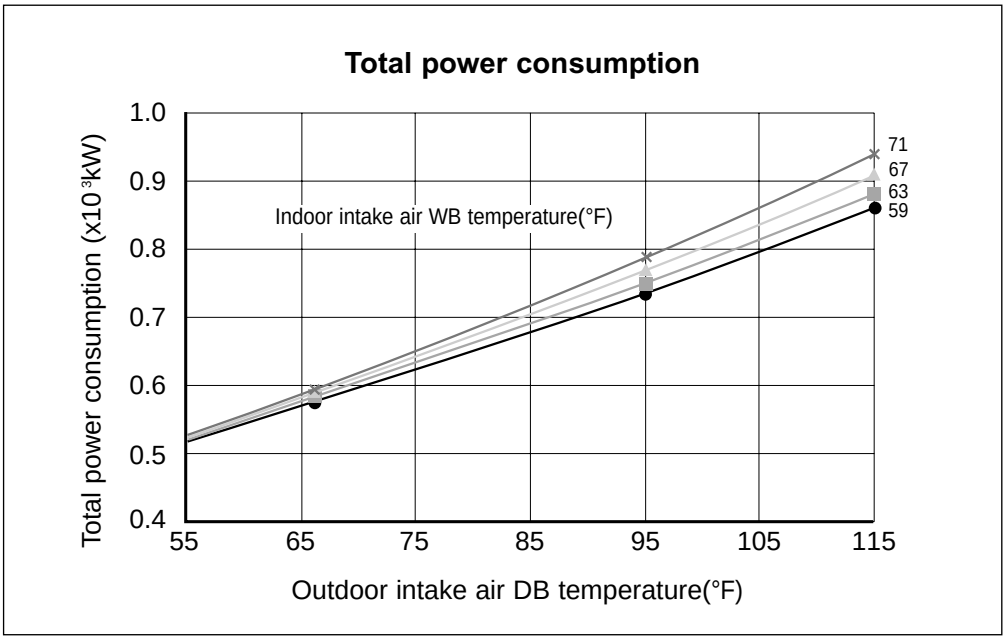


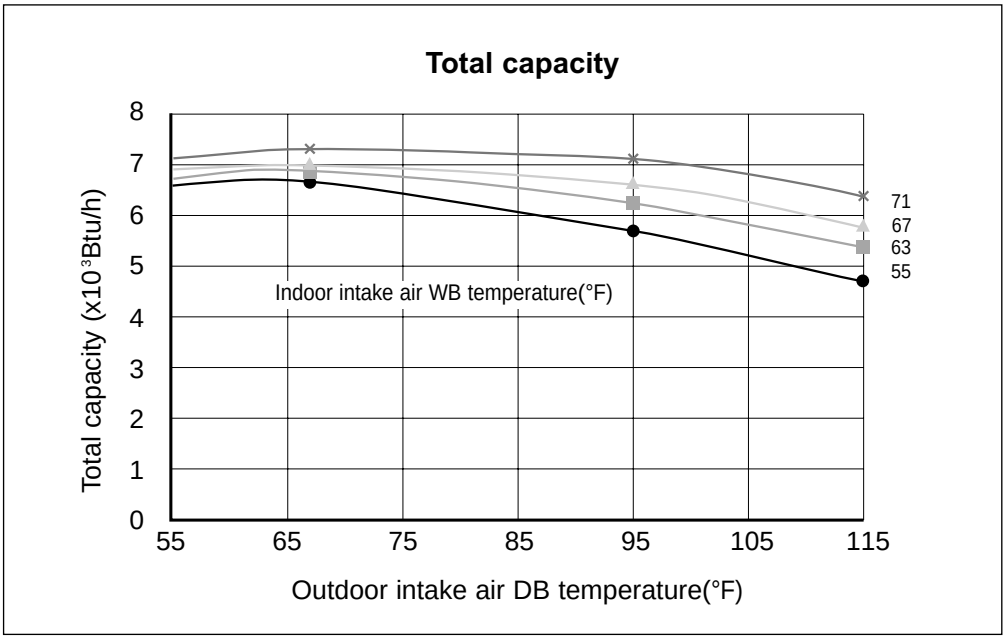
Refrigerating cycle temperature and pressure

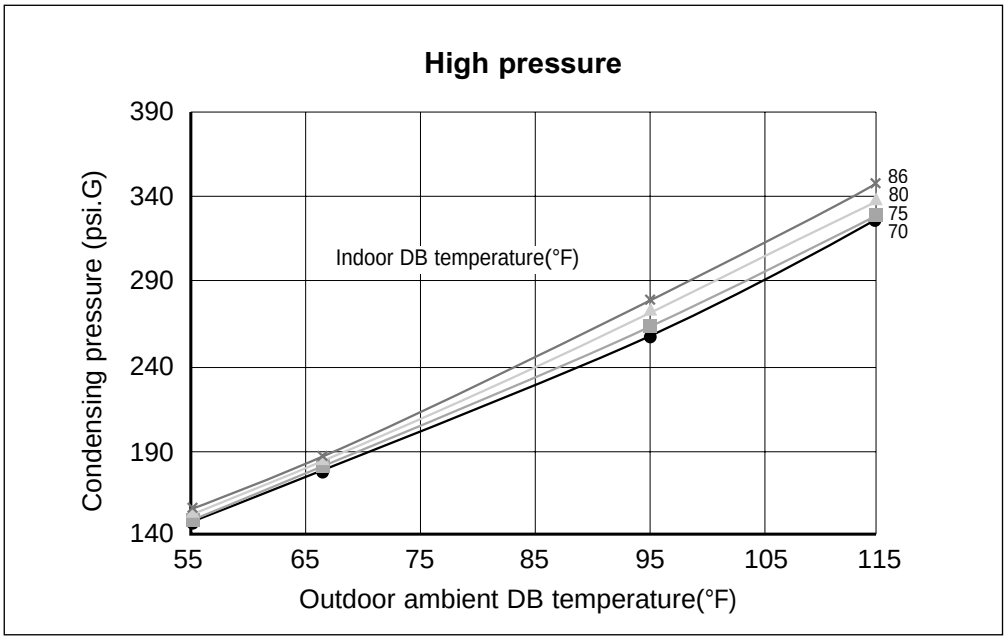
Operating Condition		STD Pressure (psi) 3-Way Valve	Piping Temp.[°F(°C)]		Use Temp. Condition [°F(°C)]			
			T1	T2	Indoor		Outdoor	
					DB	WB	DB	WB
Cooling	Standard	71~81	50~54(10~12)	50~54(10~12)	80(27)	67(19)	95(35)	75(24)
	Max over load	-	60~64(16~18)	60~64(16~18)	80(27)	67(19)	115(46)	75(24)
	Low temp	55~56	34~39(1~4)	34~39(1~4)	67(19)	57(14)	67(19)	57(14)

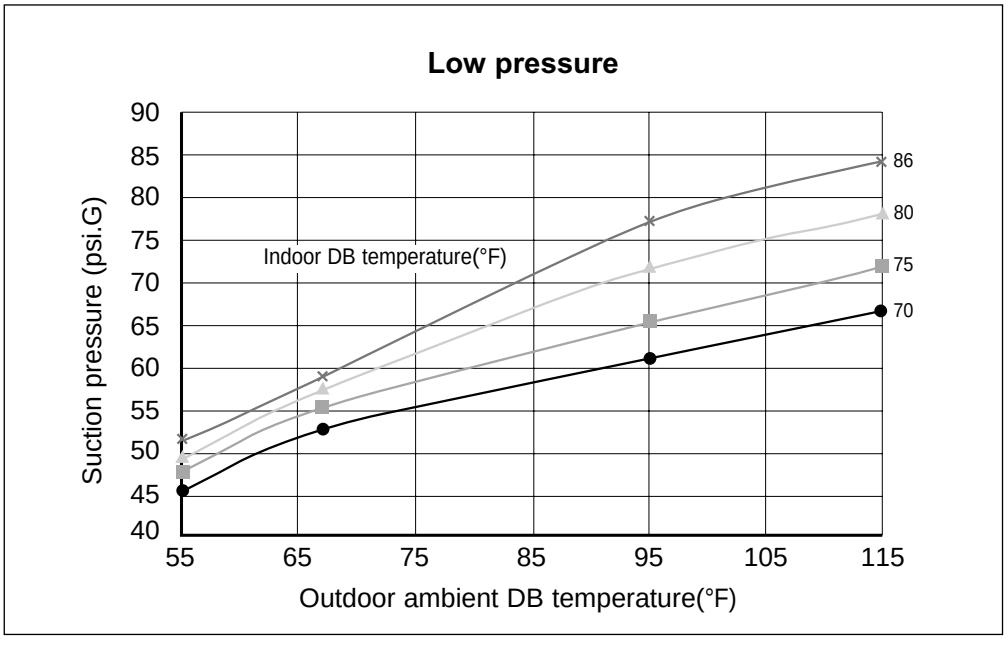
■ AS07A5(6)MA

Note ***Data is based on condition of indoor humidity 50%. Air flow should be set at HI.***

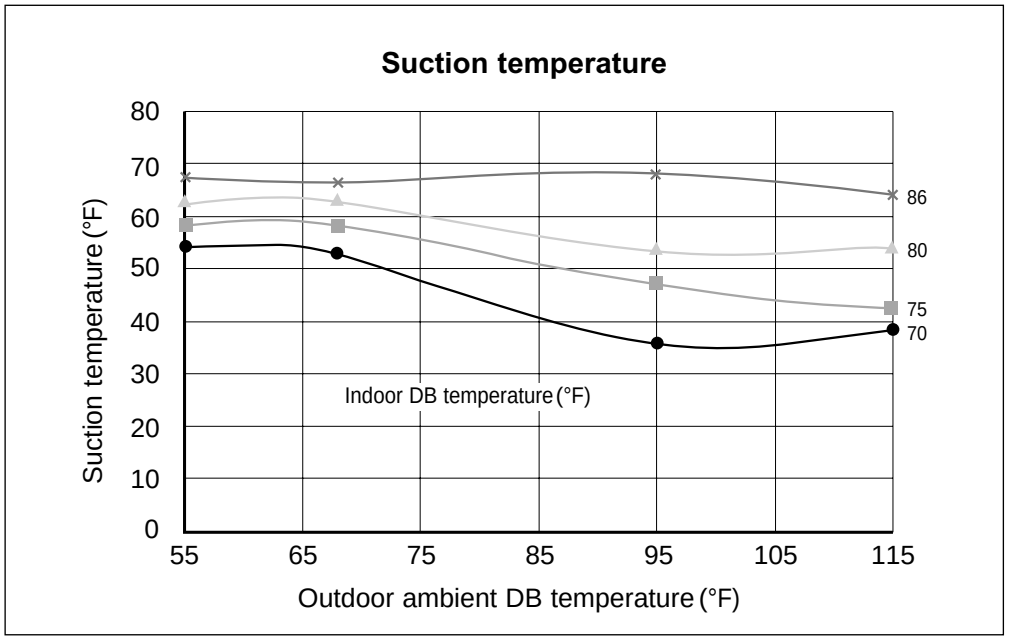


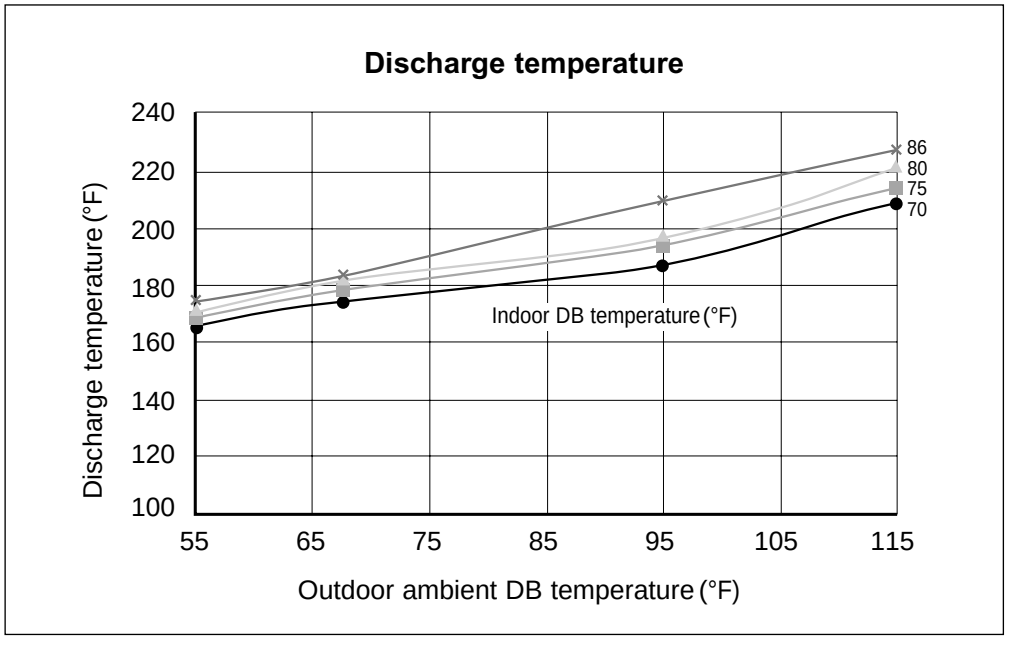



High pressure
390
340
290
240
190
140
Condensing pressure (psi.G)
Indoor DB temperature(°F)
86
80
75
70
55
65
75
85
95
105
115
Outdoor ambient DB temperature(°F)


Low pressure
90
85
80
75
70
65
60
55
50
45
40
Suction pressure (psi.G)
Indoor DB temperature(°F)
86
80
75
70
55
65
75
85
95
105
115
Outdoor ambient DB temperature(°F)

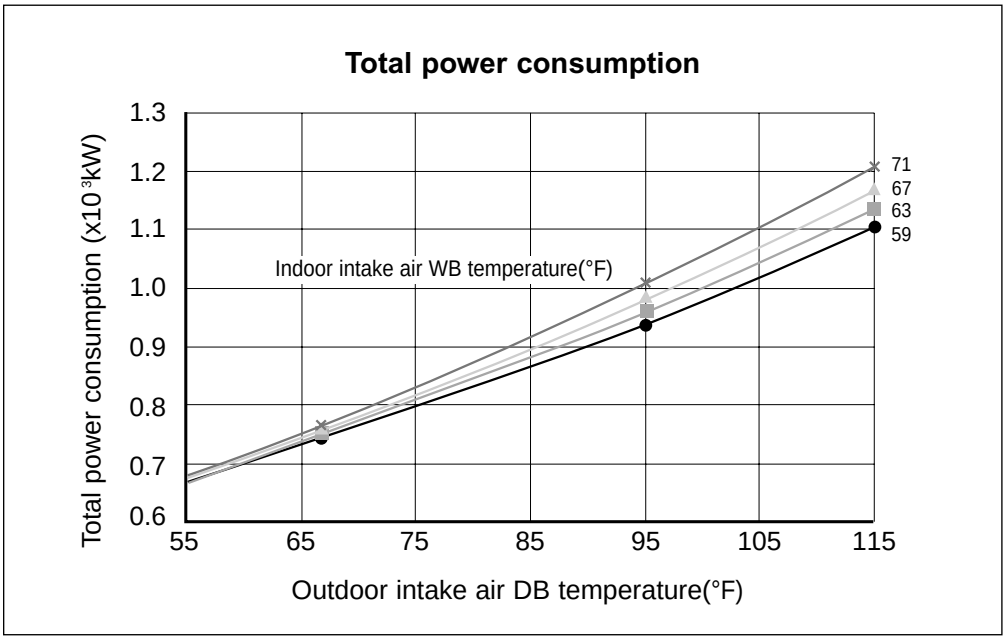
Performance curve (cont'd)

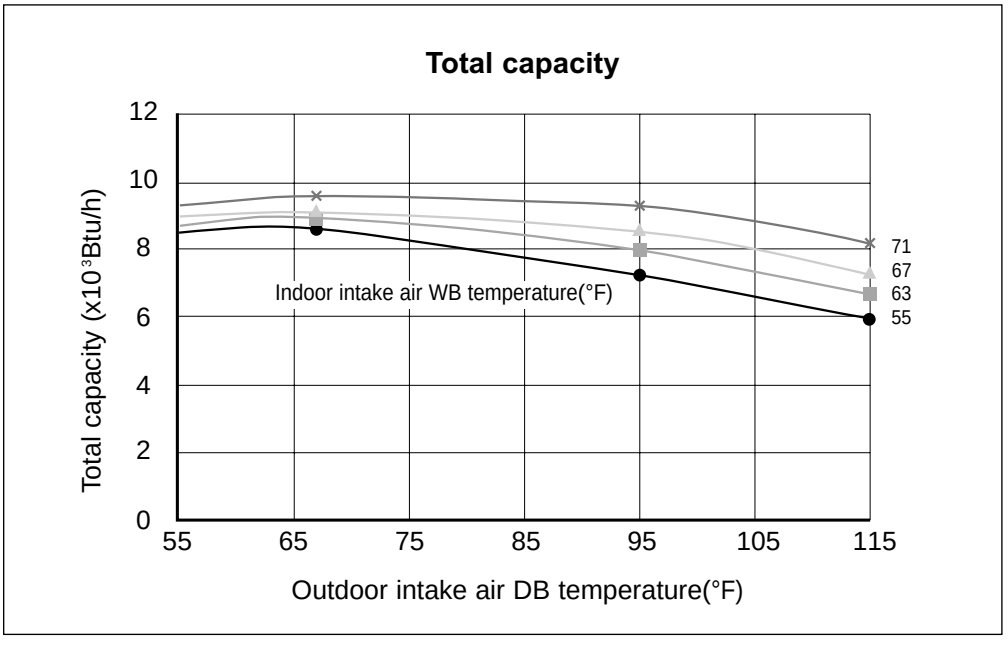




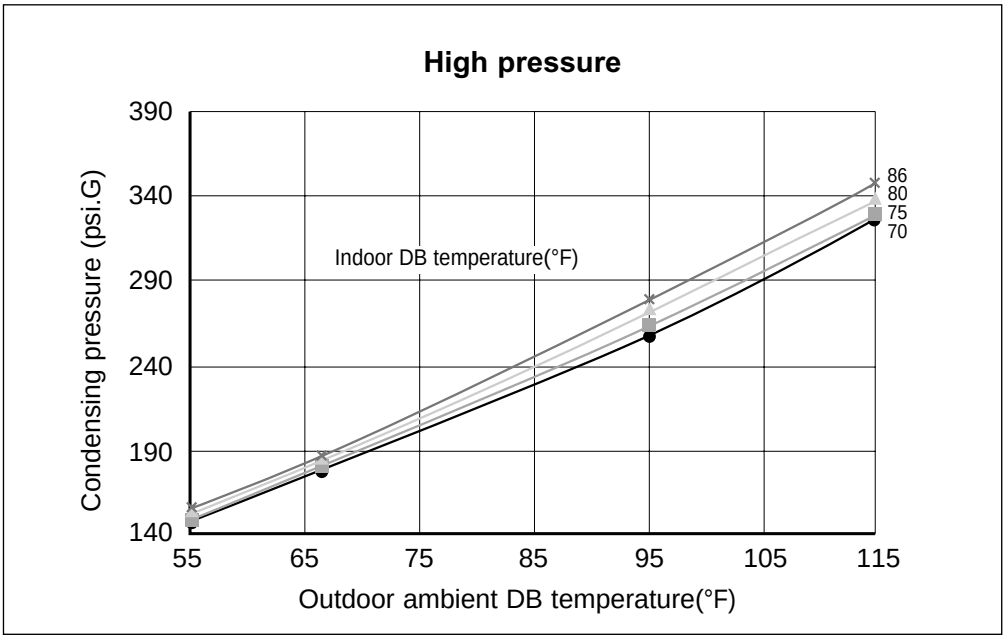
■ AS09A5(6)MAF

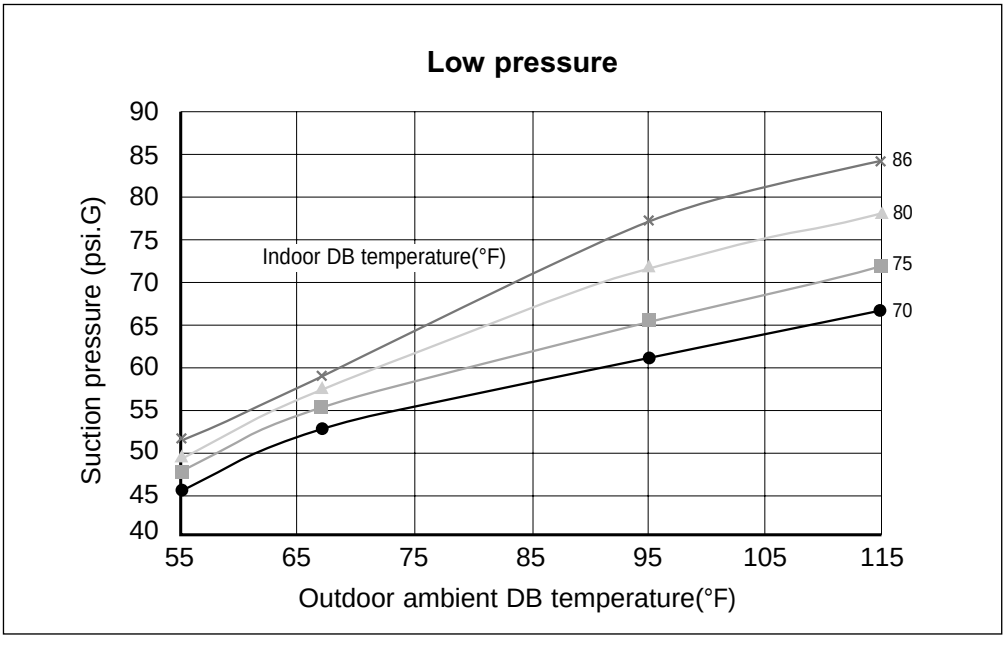
Note ***Data is based on condition of indoor humidity 50%. Air flow should be set at HI.***

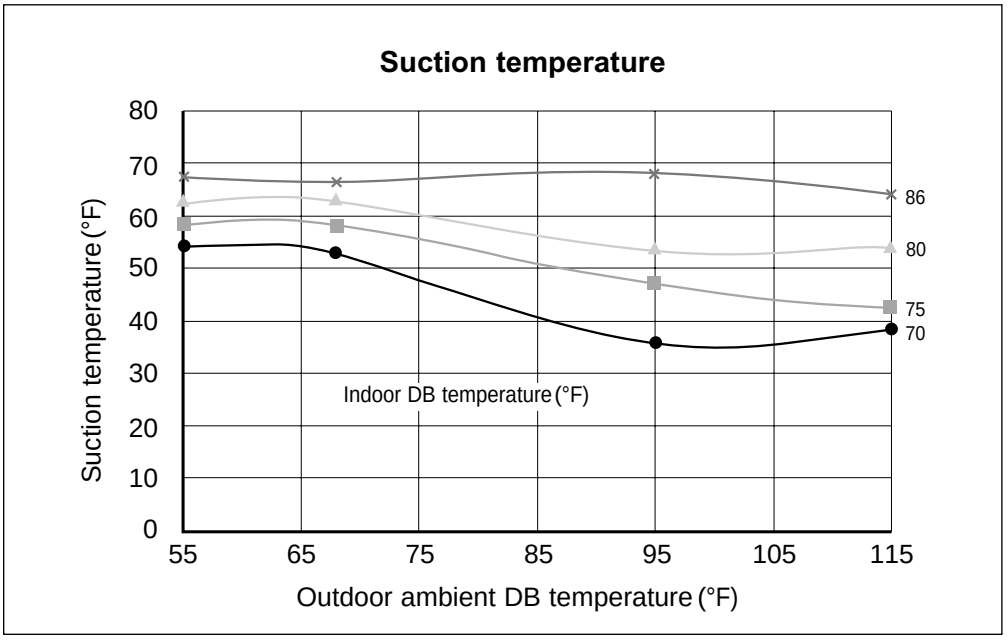


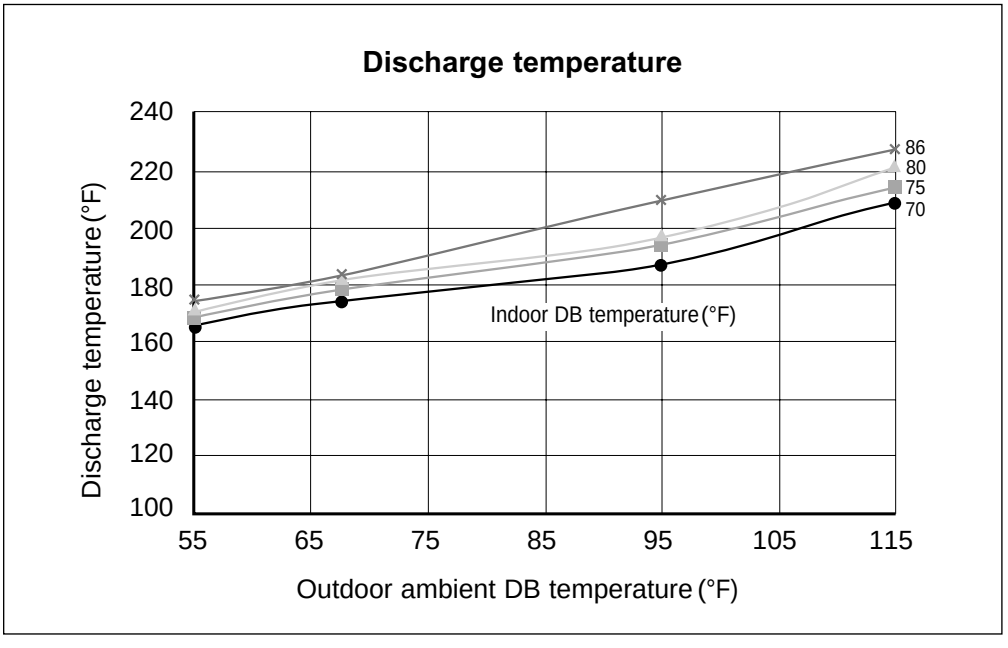


Performance curve (cont'd)



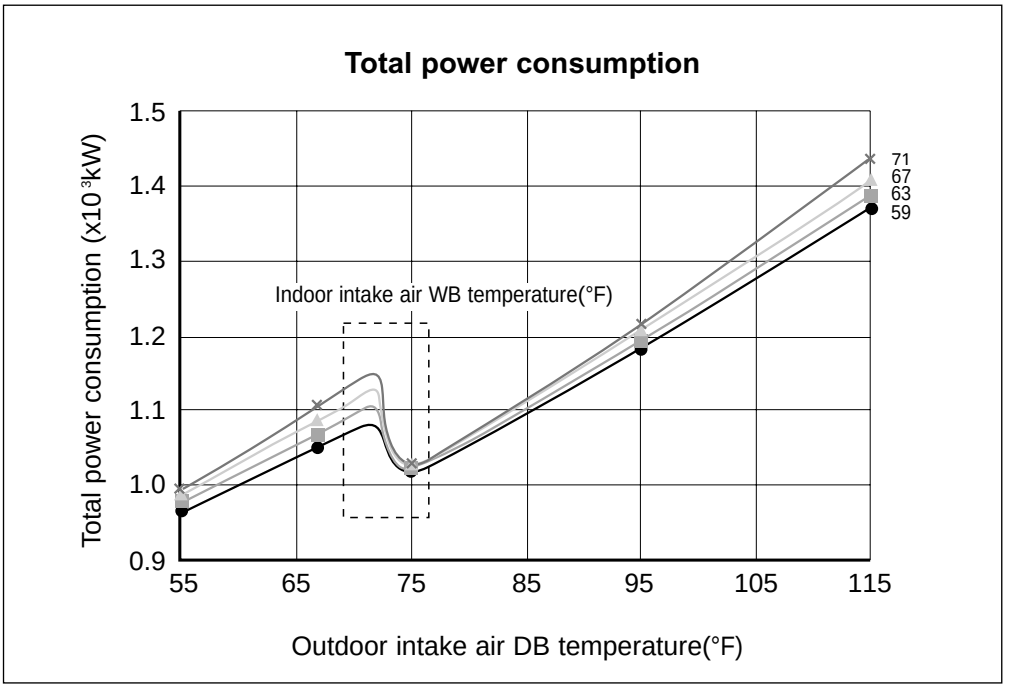


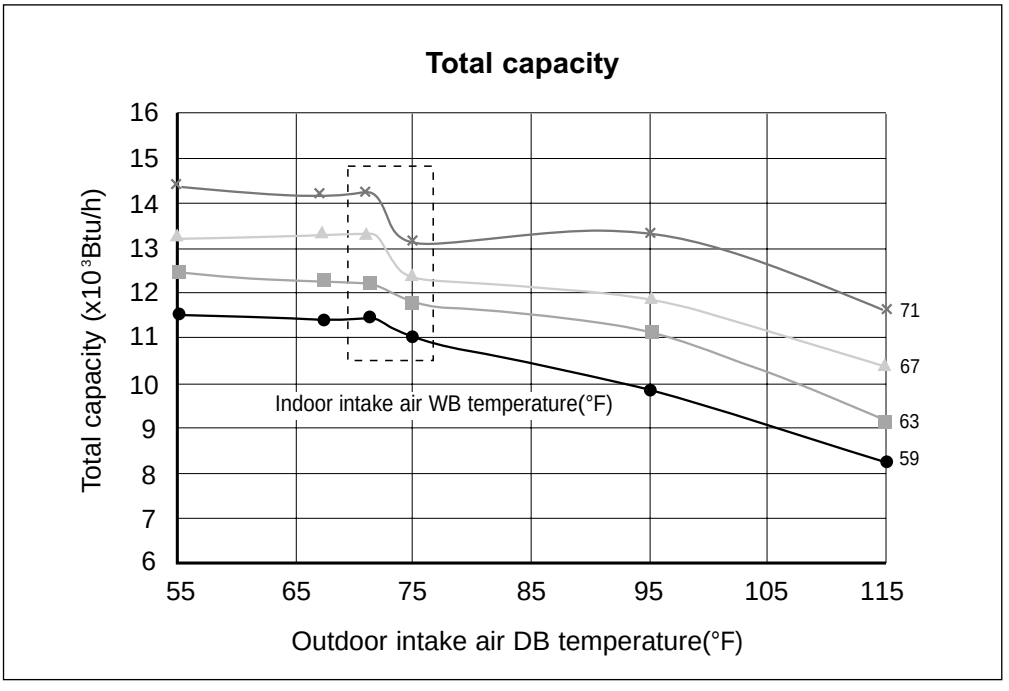

Suction temperature
Suction temperature (°F)
80
70
60
50
40
30
20
10
0
55
65
75
85
95
105
115
Outdoor ambient DB temperature (°F)
Indoor DB temperature (°F)
86
80
75
70

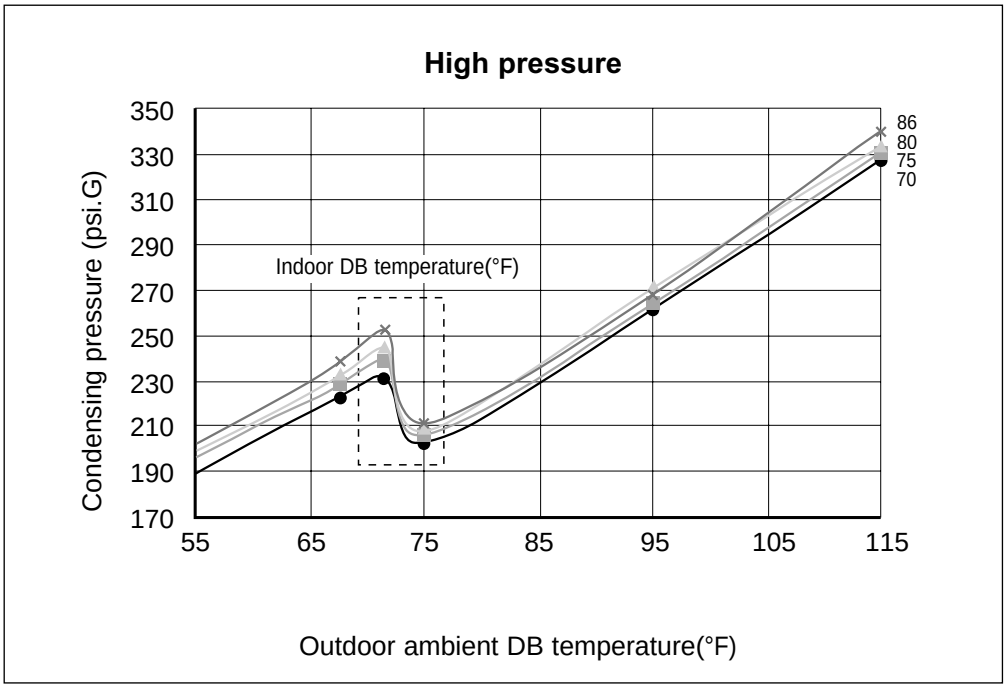

Discharge temperature
Discharge temperature (°F)
240
220
200
180
160
140
120
100
55
65
75
85
95
105
115
Outdoor ambient DB temperature (°F)
Indoor DB temperature (°F)
86
80
75
70

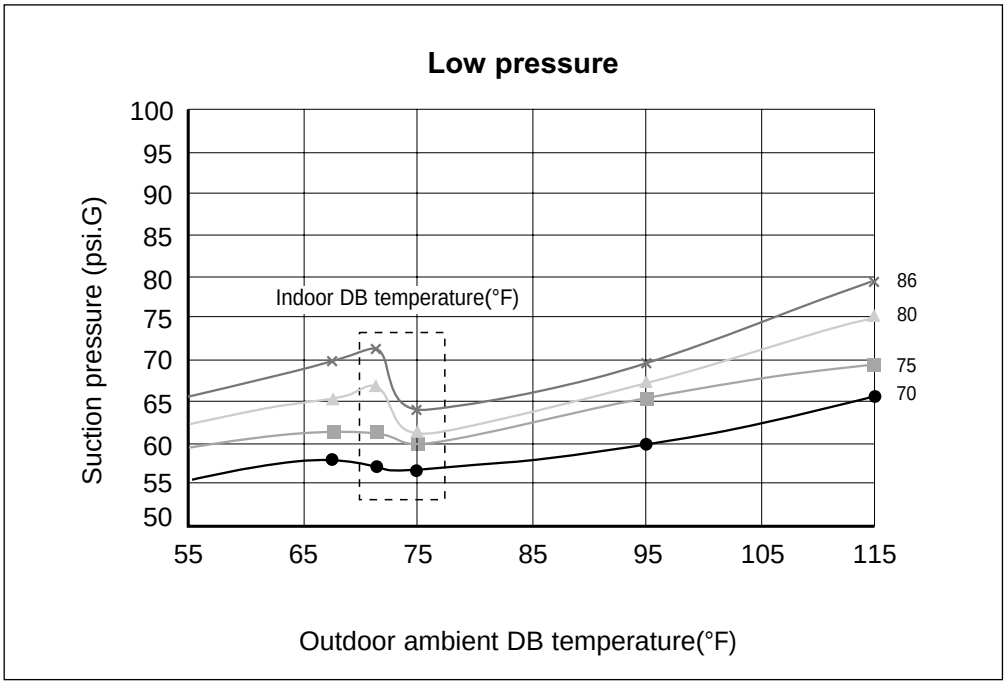
■ AS12AA(B)MCF

Note ***Changes in the dotted box are caused by the RPM change of outdoor fan.***

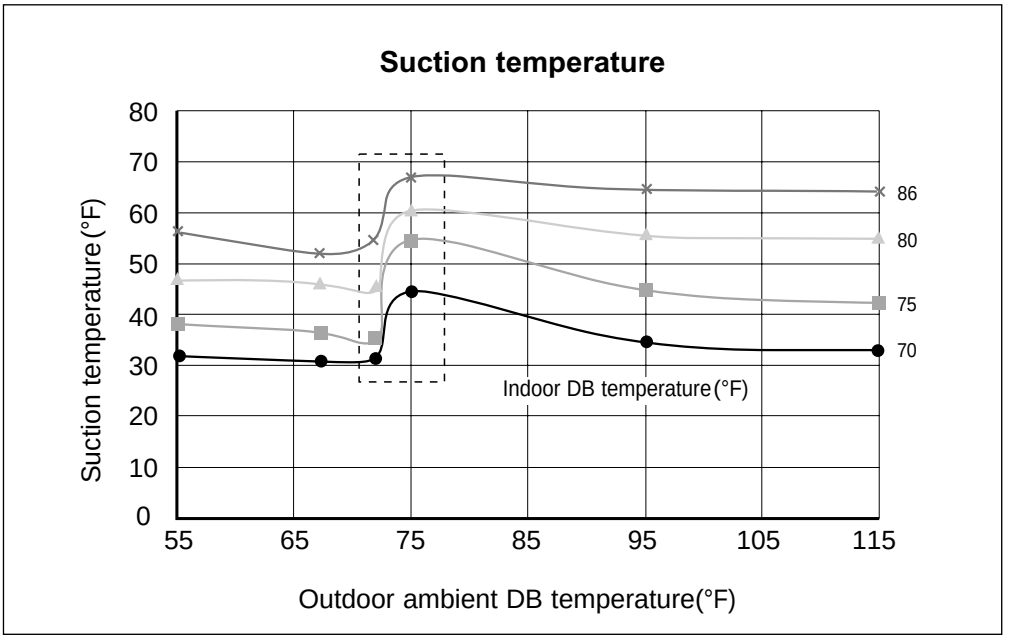


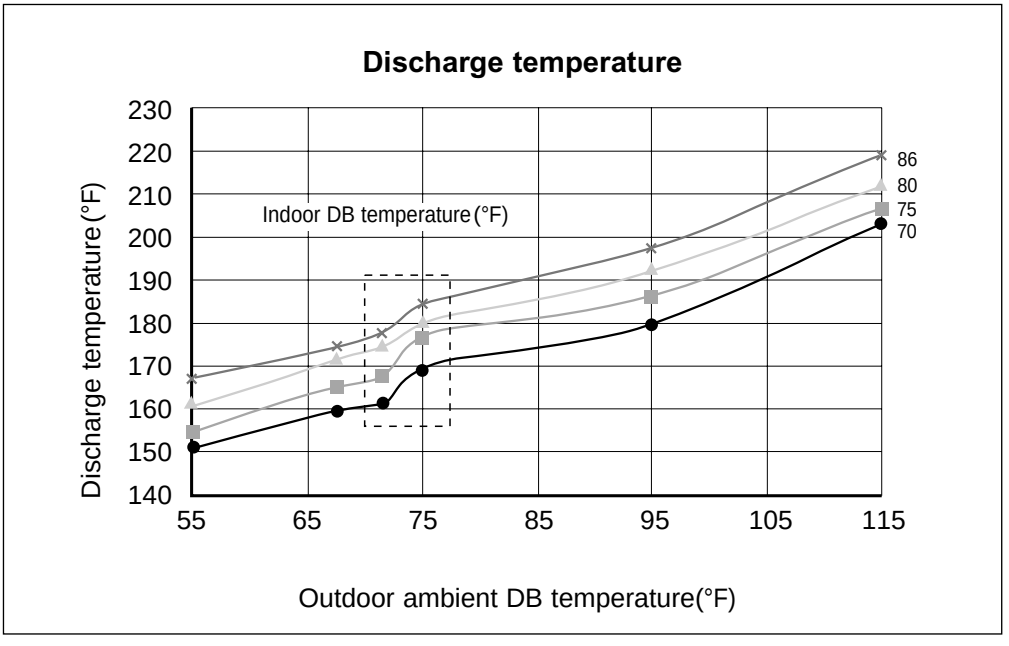



High pressure
Condensing pressure (psi.G)
350
330
310
290
270
250
230
210
190
170
Indoor DB temperature(°F)
86
80
75
70
55
65
75
85
95
105
115
Outdoor ambient DB temperature(°F)


Low pressure
Suction pressure (psi.G)
100
95
90
85
80
75
70
65
60
55
50
Indoor DB temperature(°F)
86
80
75
70
55
65
75
85
95
105
115
Outdoor ambient DB temperature(°F)

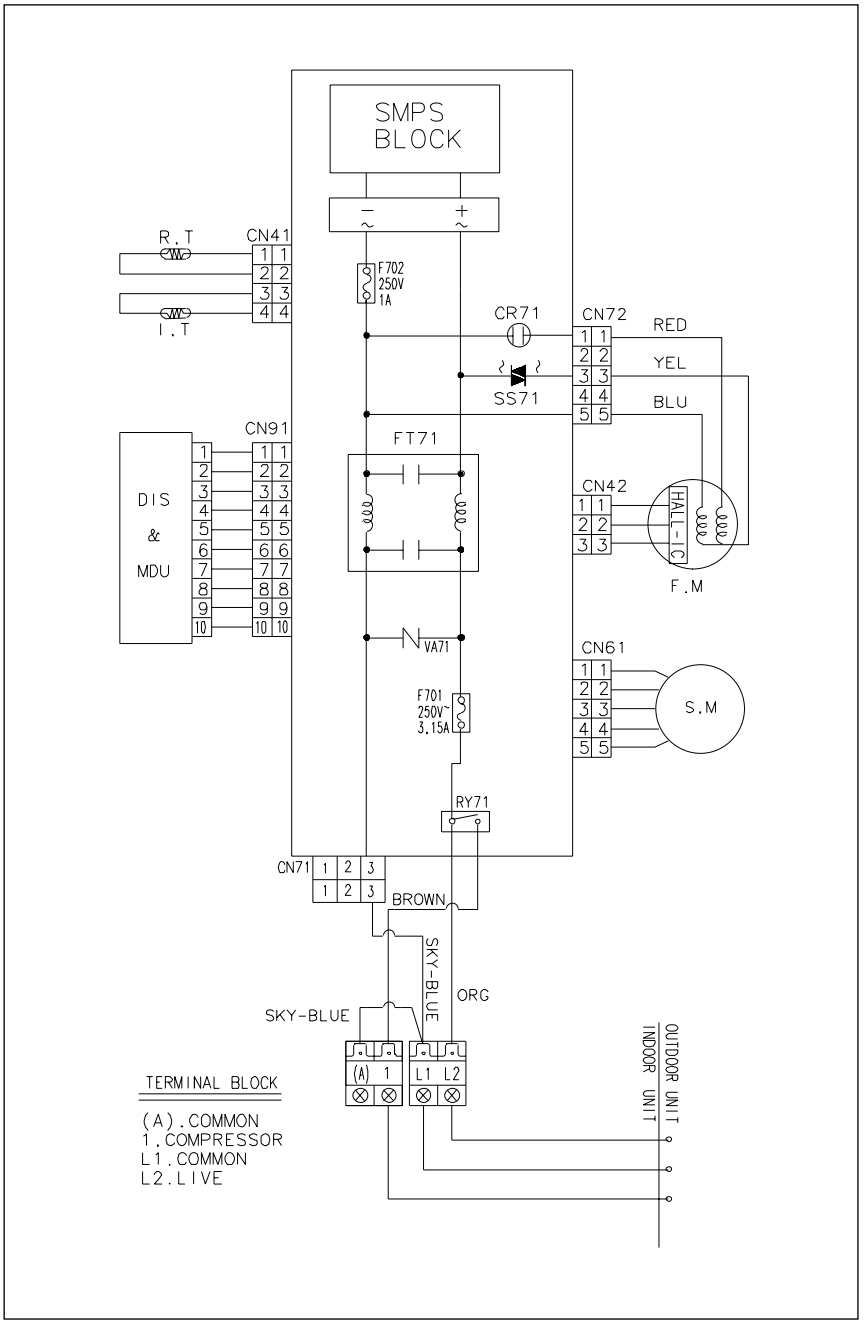
Performance curve (cont'd)





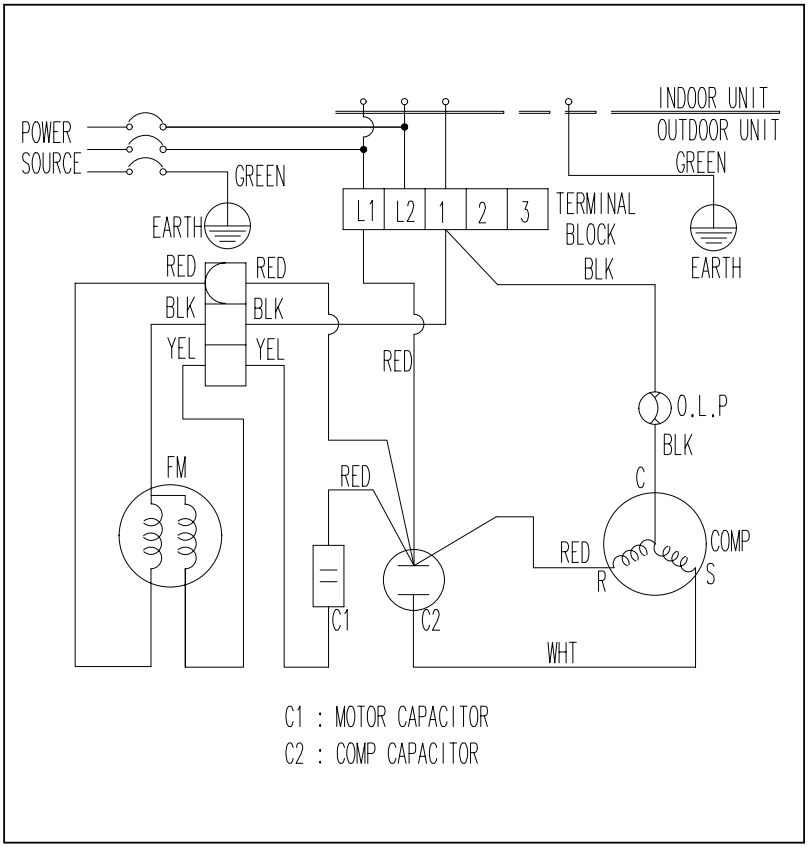
1 Indoor unit

■ AS07A5(6)MA/AS09A5(6)MAF/AS12AA(B)MCF

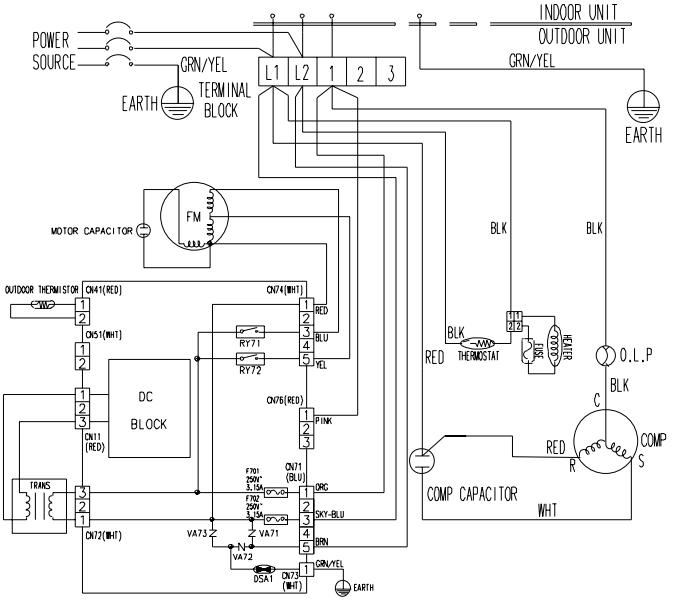


2 Outdoor unit

■ **US07A5(6)MA/US09A5(6)MAF**



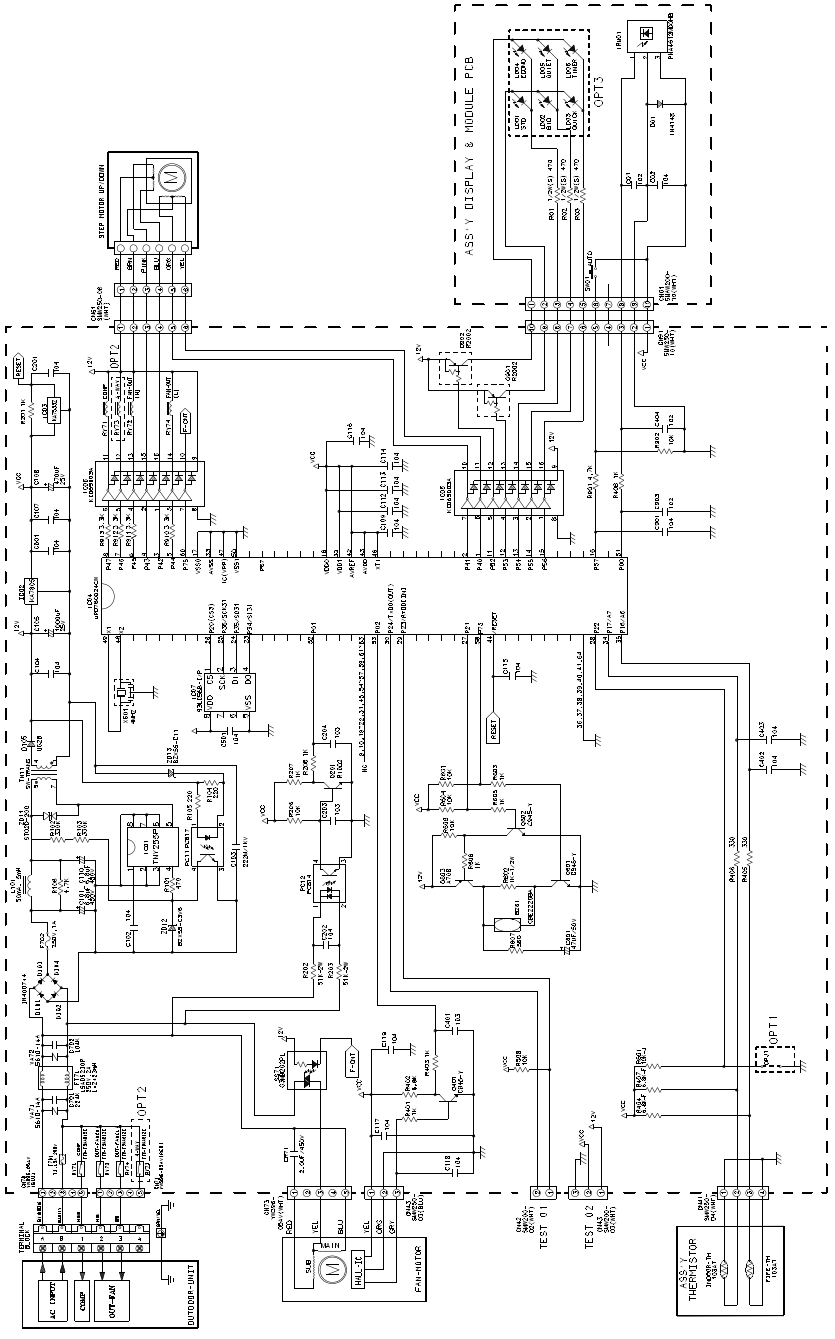
■ US12AA(B)MCF



Motor capacitor : 1.5μF x 450VAC Comp capacitor : 35μF x 450VAC

1 Indoor unit

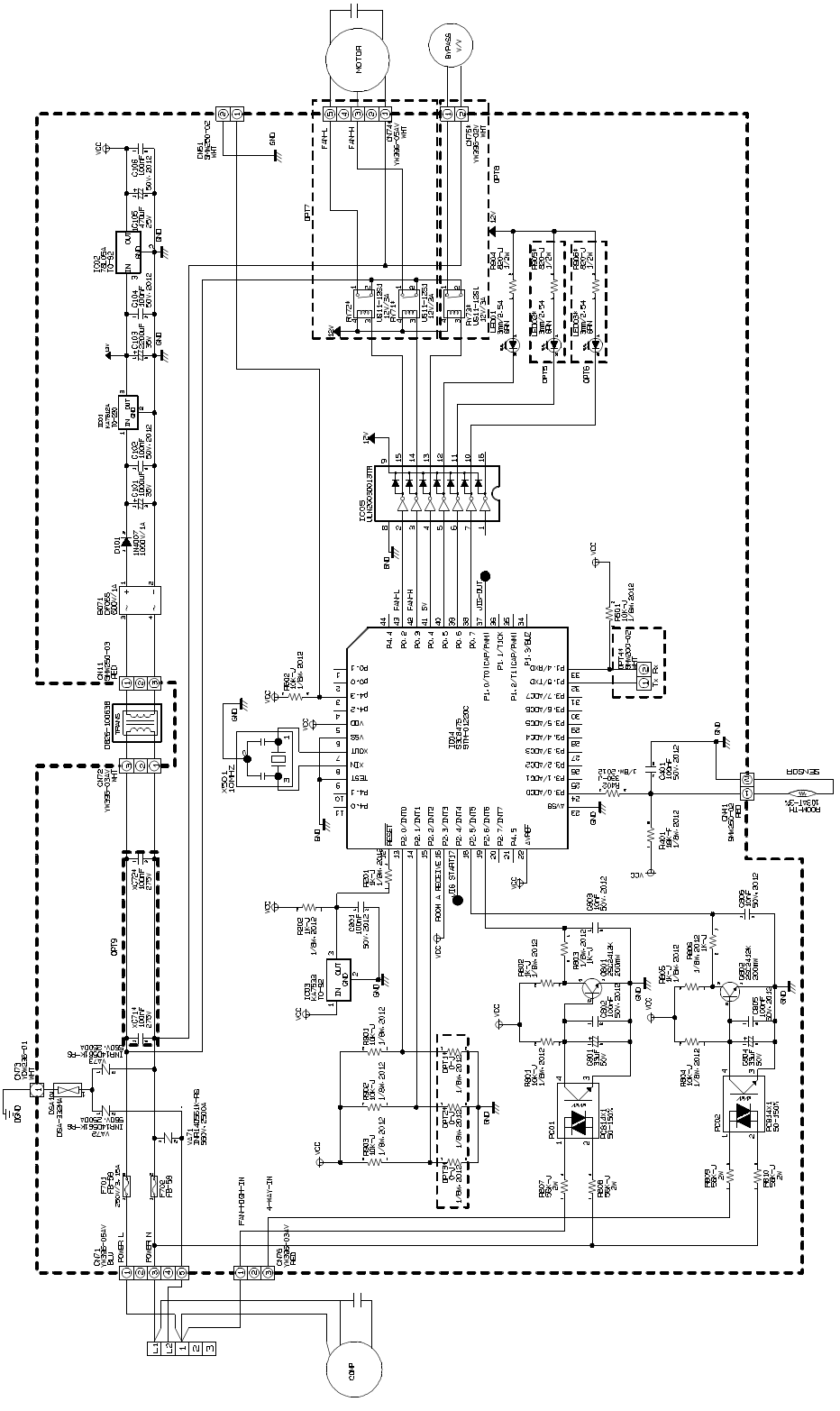
■ AS07A5(6)MA/AS09A5(6)MAF/AS12AA(B)MCF



CR71	Model	Input Voltage
4uF/300V	AS07A5(6)MA/AS09A5(6)MAF	115V/60Hz
1.2uF/450V	AS12AA(B)MCF	208V~230V/60Hz

2 Outdoor unit

■ US12AA(B)MCF



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