



ROOM AIR CONDITIONER

AKG SERIES

SERVICE MANUAL

Models : AKG9ASG-W
AKG9ASN-W
AKG9AGN-W
AKG9GSN-W
AKG9RSS-W

C O N T E N T S

| | |
|-------------------------------------|----|
| SPECIFICATIONS | 1 |
| CIRCUIT DIAGRAM | 2 |
| MICROCOMPUTER CONTROL CIRCUIT | 5 |
| PRINTED CIRCUIT BOARD LAYOUTS | 6 |
| DISASSEMBLY ILLUSTRATION | 7 |
| PARTS LIST | 12 |

S P E C I F I C A T I O N S

| MODEL | | AKG9ASG-W | AKG9ASN-W | AKG9GSN-W | AKG9RSS-W |
|------------------|------|-----------|-------------|-------------|---------------|
| | | | AKG9AGN-W | | |
| COOLING CAPACITY | (kW) | 2.50 | 2.50 - 2.55 | 2.50 - 2.55 | 2.50 |
| HEATING CAPACITY | (kW) | — | — | — | 2.80 |
| HEATING METHOD | | — | — | — | Reverse cycle |

ELECTRICAL DATA

| | | | | |
|-----------------|---------|------|-------------|------|
| POWER SOURCE | (V) | 220 | 220 - 240 | 240 |
| FREQUENCY | (Hz) | 50 | | |
| RUNNING CURRENT | (A) | | | |
| | COOLING | 4.2 | 4.4 - 4.3 | 4.4 |
| | HEATING | — | — | 4.4 |
| INPUT WATTS | (kW) | | | |
| | COOLING | 0.90 | 0.96 - 1.02 | 1.00 |
| | HEATING | — | — | 0.98 |
| E.E.R. | (kW/kW) | | | |
| | COOLING | 2.78 | 2.60 - 2.50 | 2.50 |
| | HEATING | — | — | 2.86 |

COMPRESSOR

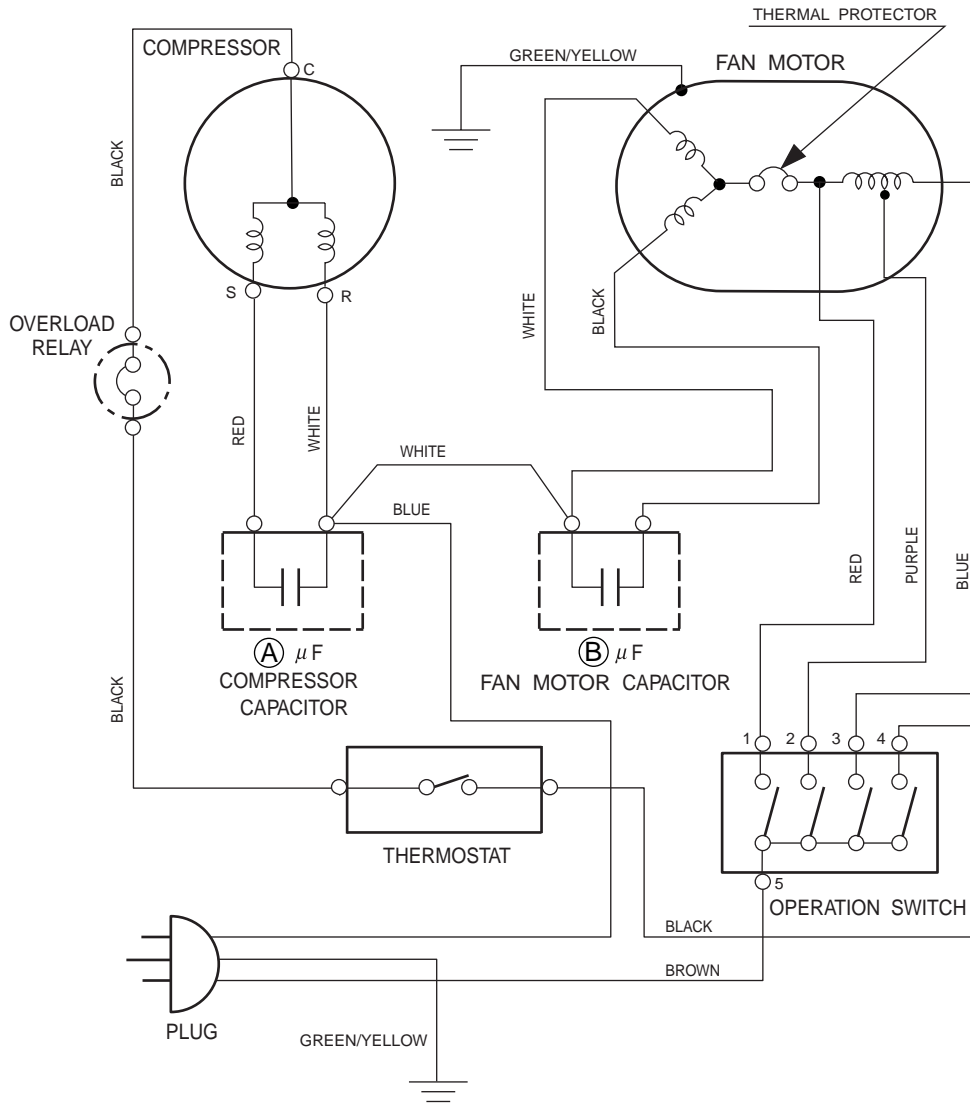
| TYPE | Hermetic type, Rotary type | | |
|-------------|-----------------------------------|---------------------------------------|-------------------------------------|
| CODE | QK164PAC 3 Leg 220 - 240V 50Hz | 2PS164D2AE02 3 Leg 220 - 240V 50Hz | 806-919-45 3 Leg 220 - 240V 50Hz |
| REFRIGERANT | R-22 (g) | 750 | 640 |

FAN MOTOR

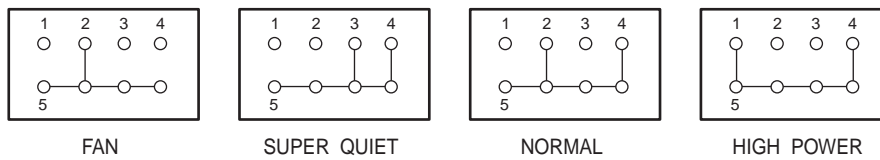
| CODE | | MFC-09BTT 220 - 240V 50Hz | MFC-09BTT 220 - 240V 50Hz | MFC-09CTT 220 - 240V 50Hz |
|-------------|----------|------------------------------|------------------------------|------------------------------|
| HIGH POWER | (r.p.m.) | 1,040 | 1,040 - 1,100 | 1,120 |
| SUPER QUIET | (r.p.m.) | 800 | 800 - 860 | 890 |

CIRCUIT DIAGRAM

**Models : AKG9ASG-W
AKG9ASN-W
AKG9AGN-W**

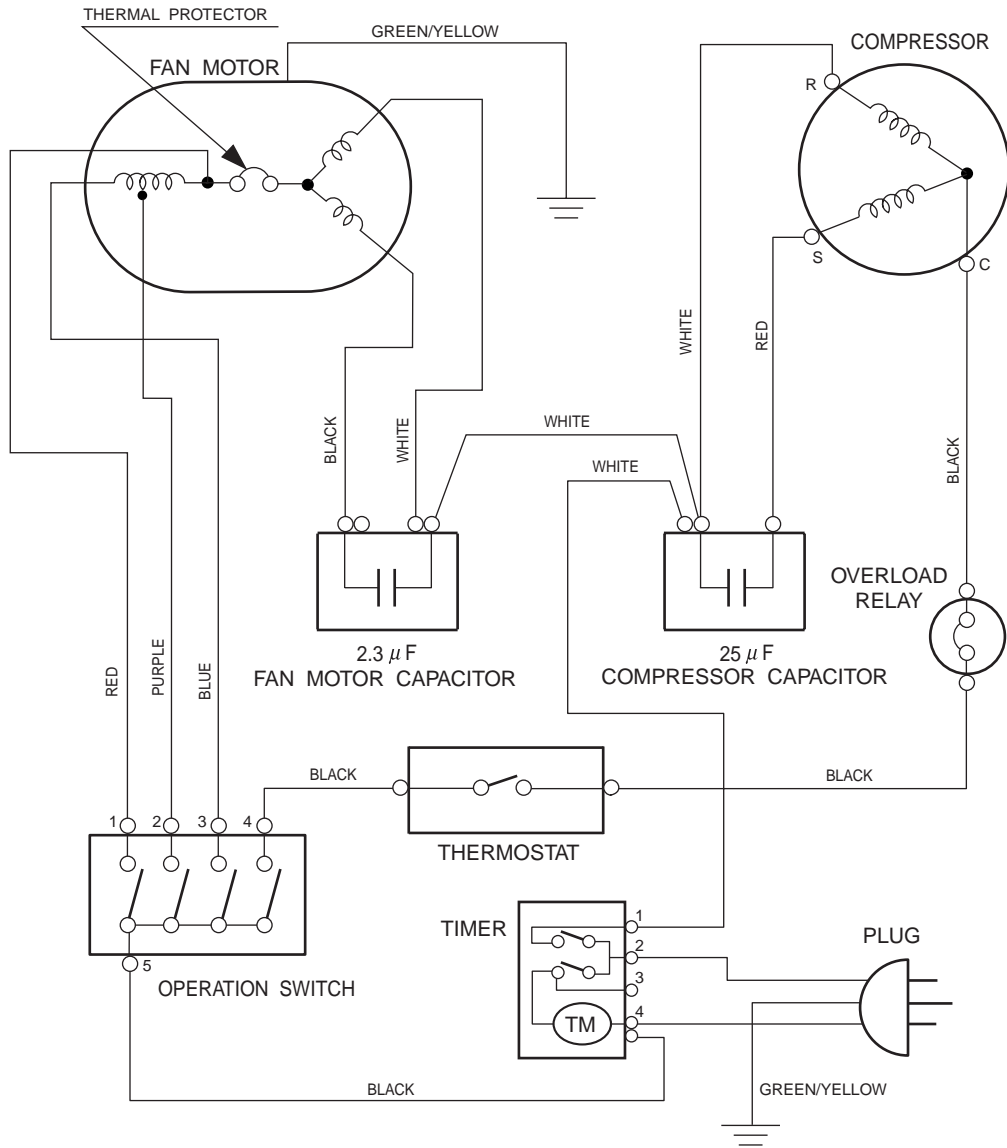


OPERATION SWITCH INTERNAL CONNECTIONS

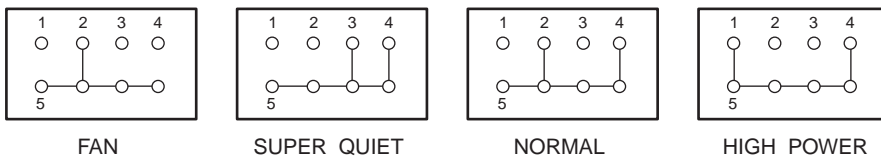


| Applicable models | (A) | (B) |
|------------------------|-----|-----|
| AKG9ASG-W | 30 | 2.3 |
| AKG9ASN-W AKG9AGN-W | 25 | 2.3 |

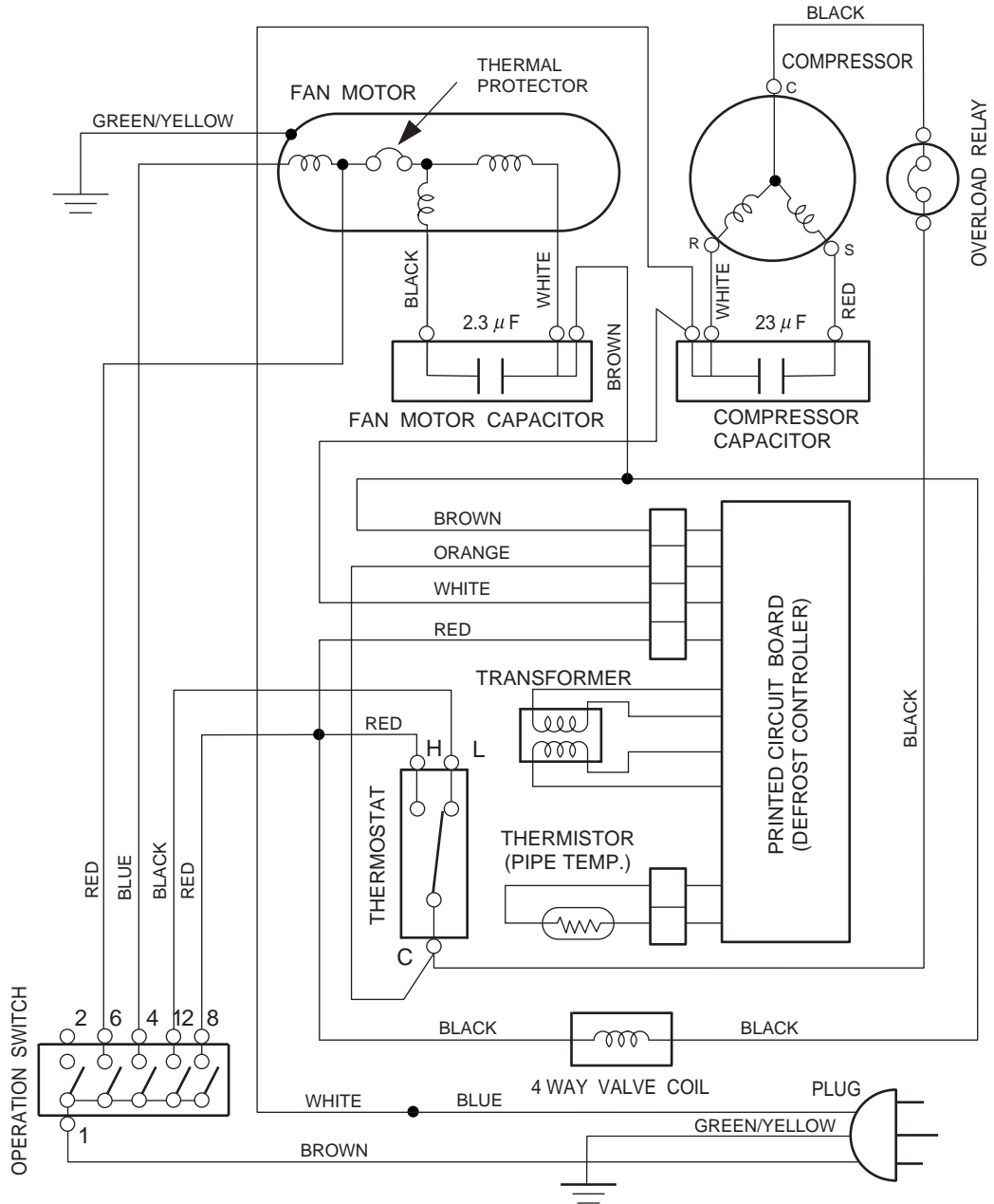
Model : AKG9GSN-W



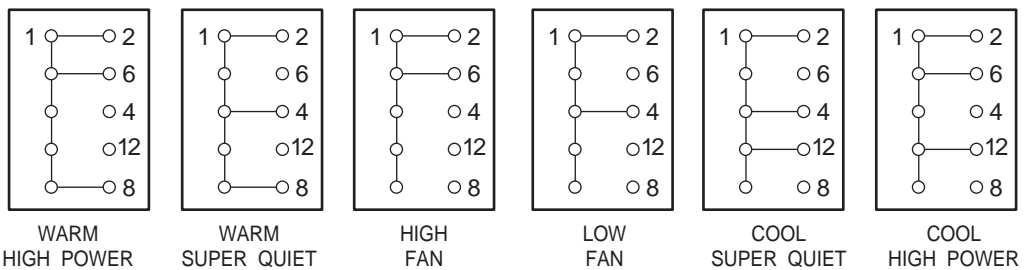
OPERATION SWITCH INTERNAL CONNECTIONS



Model : AKG9RSS-W

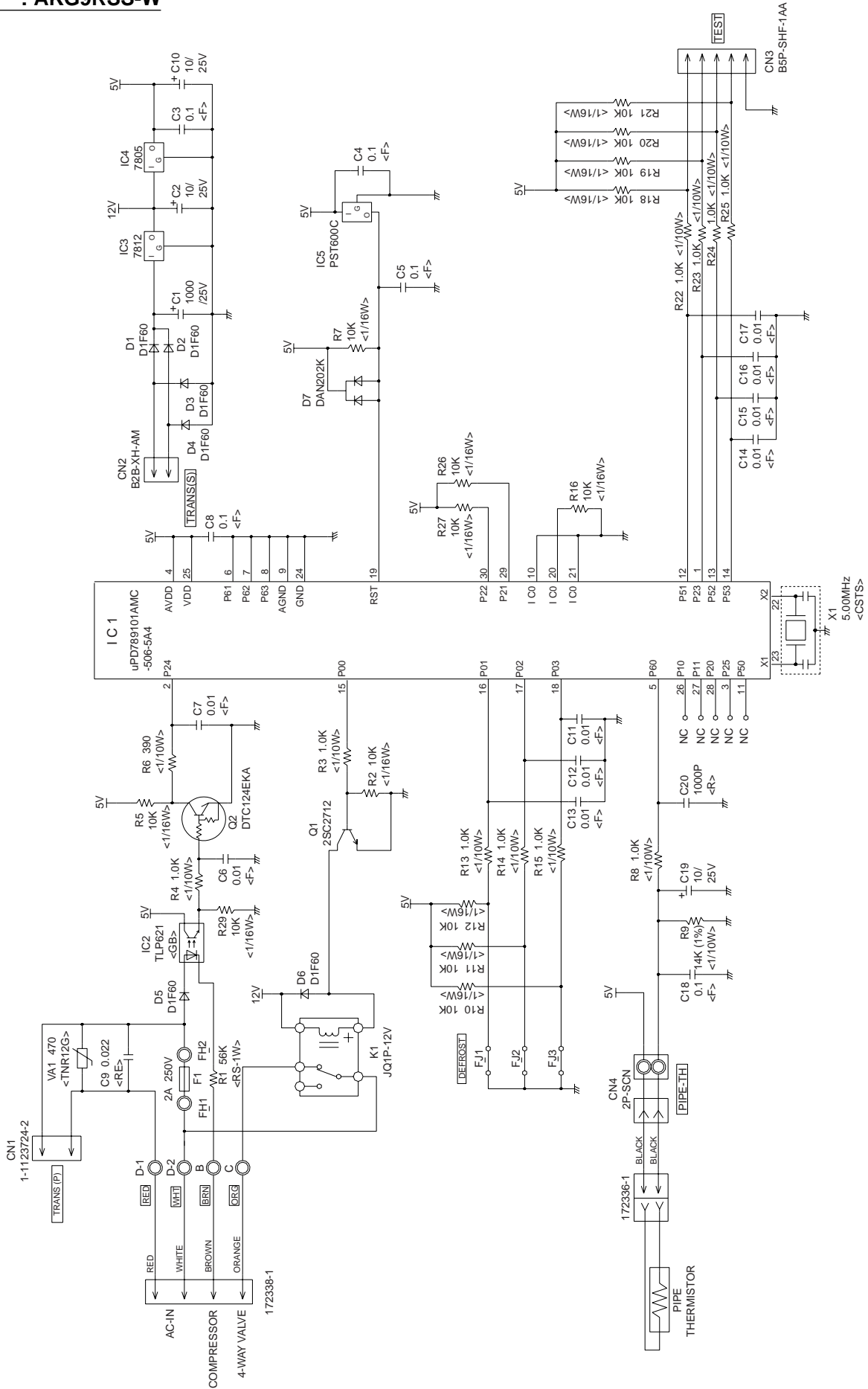


OPERATION SWITCH INTERNAL CONNECTIONS



MICROCOMPUTER CONTROL CIRCUIT

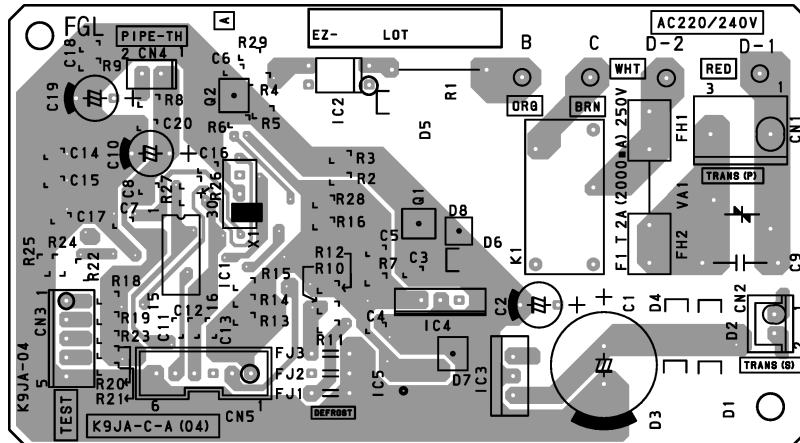
Model : AKG9RSS-W



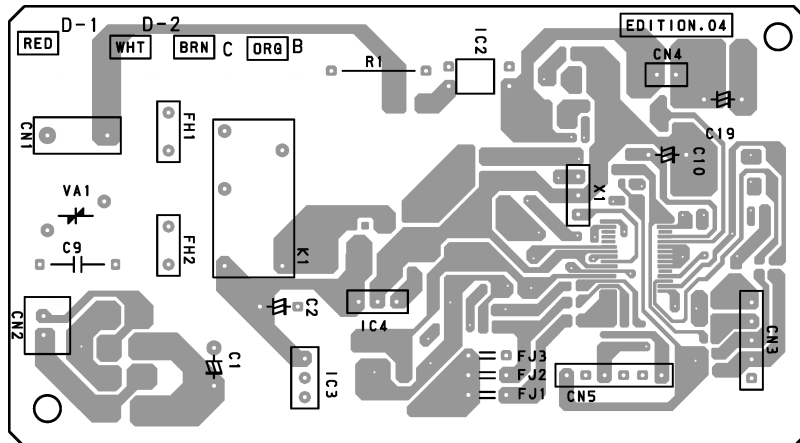
PRINTED CIRCUIT BOARD LAYOUT

Model : AKG9RSS-W

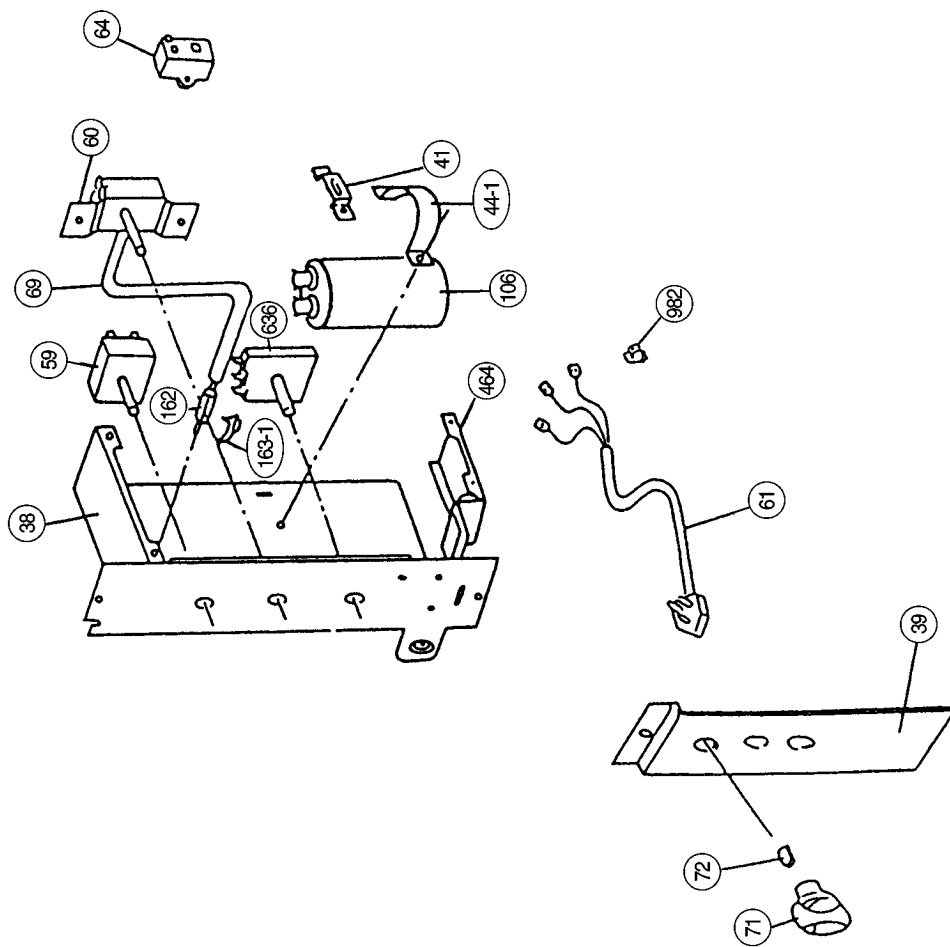
(Viewed from the component side)



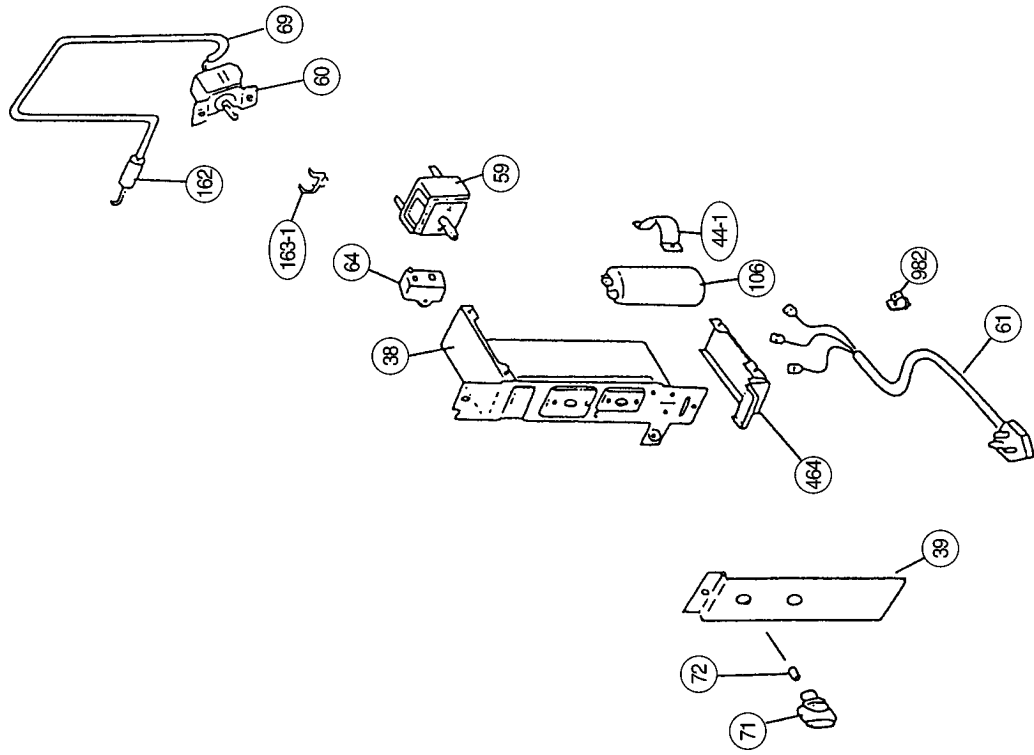
(Viewed from the solder side)



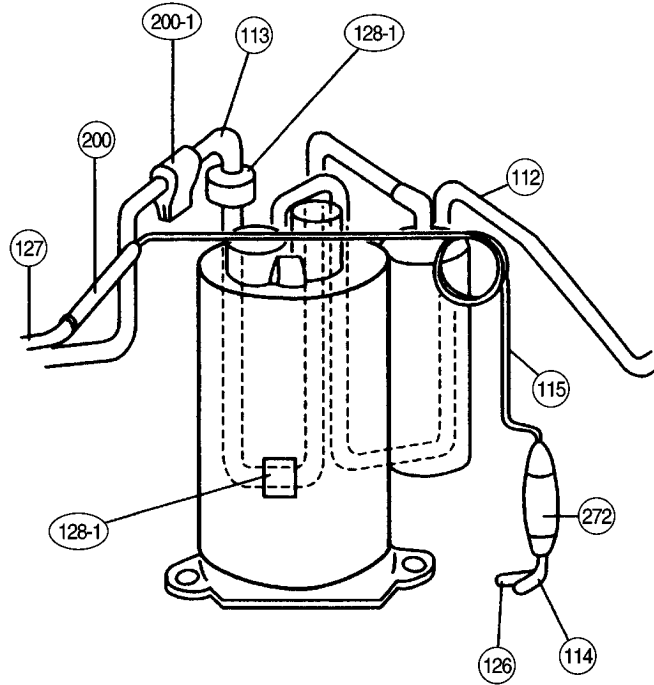
Model: AKG9GSN-W



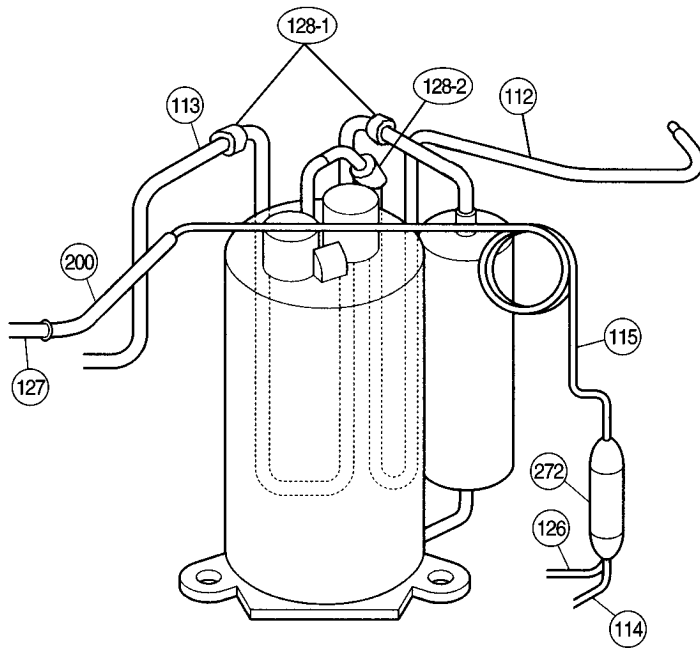
**Models: AKG9ASG-W
AKG9ASN-W
AKG9AGN-W**



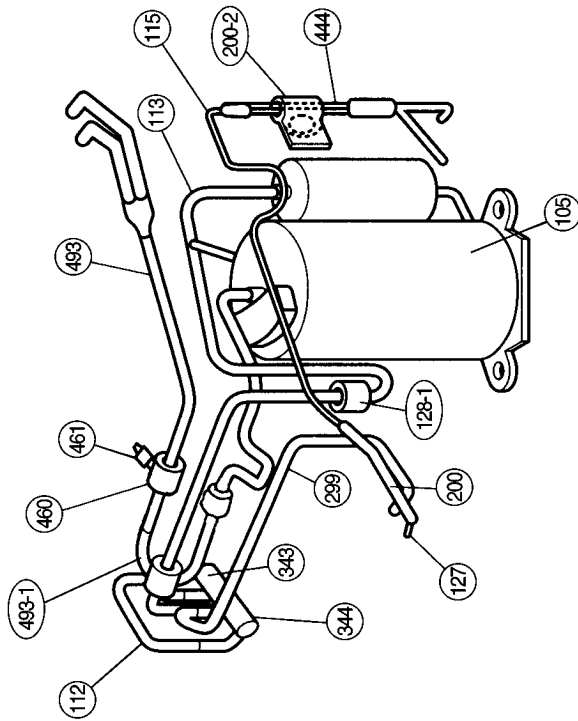
**Models : AKG9ASN-W
AKG9AGN-W
AKG9GSN-W**



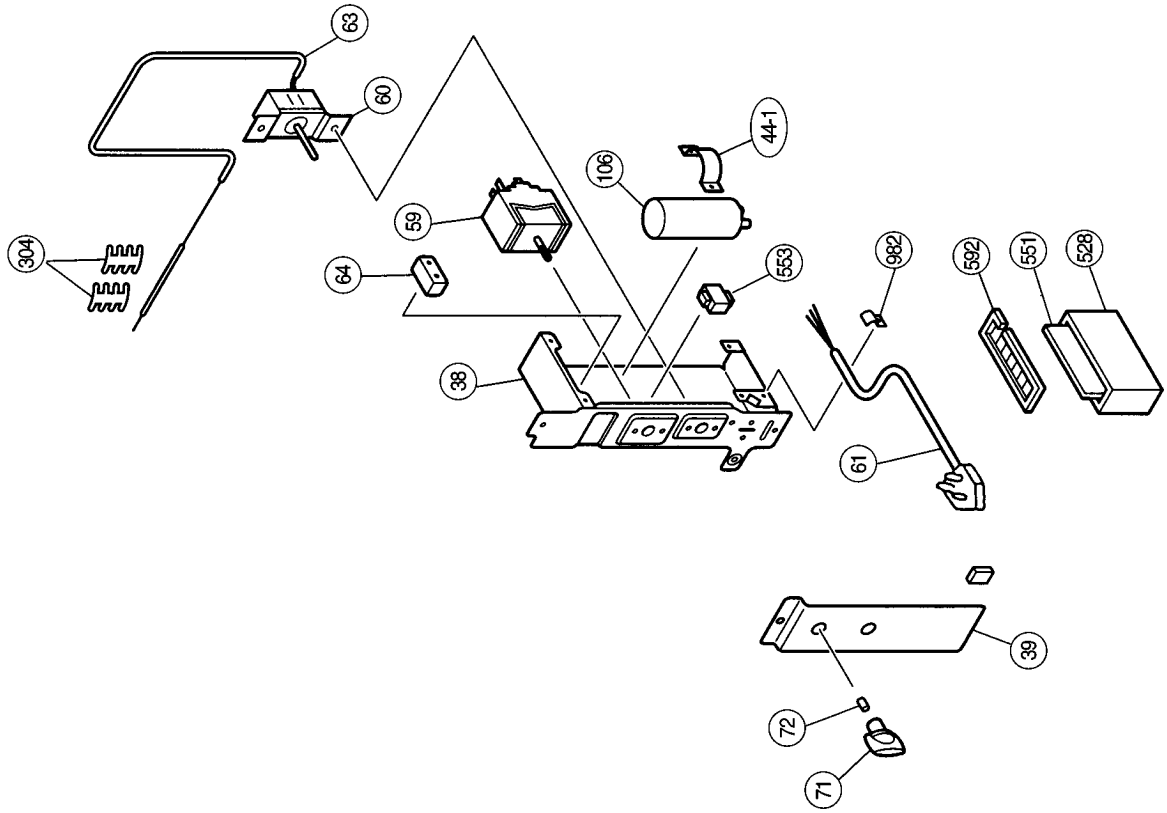
Model : AKG9ASG-W

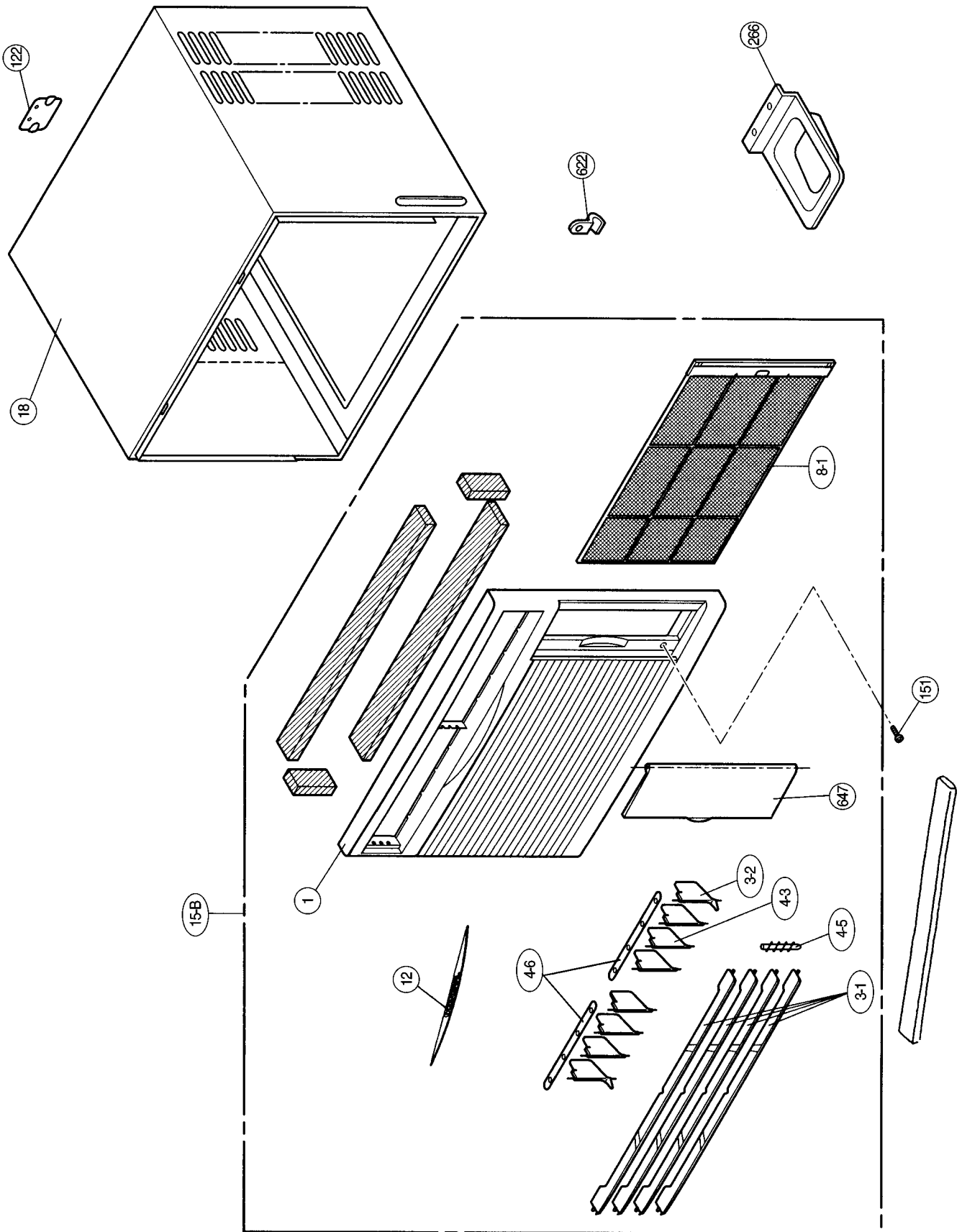


Model : AKG9R55-W



Model : AKG9R55-W





PARTS LIST

When you order parts, please make a photocopy of this page and fill the number of the parts in the "Order" column.

FRONT PANEL PARTS

| Ref. No. | Description | Part No. | | | | | Ord. |
|----------|--------------------|------------|------------|------------|------------|------------|------|
| | | AKG9ASG-W | AKG9ASN-W | AKG9AGN-W | AKG9GSN-W | AKG9RSS-W | Q'ty |
| 1 | Front panel | 9358096109 | 9358096017 | 9358096017 | 9358096017 | 9358096109 | |
| 3-1 | Louver-A | 9358099032 | 9358099018 | 9358099018 | 9358099018 | 9358099032 | |
| 3-2 | Louver-C | 9358101025 | 9058101018 | 9058101018 | 9058101018 | 9358101025 | |
| 4-3 | Louver-B | 9358100028 | 9358100011 | 9358100011 | 9358100011 | 9358100028 | |
| 4-5 | Connecting Plate-A | 9358102039 | 9358102015 | 9358102015 | 9358102015 | 9358102039 | |
| 4-6 | Connecting Plate-B | 9358103029 | 9358103012 | 9358103012 | 9358103012 | 9358103029 | |
| 8-1 | Filter | 9358098042 | 9358098028 | 9358098028 | 9358098028 | 9358098042 | |
| 12 | Decoration Panel | 9361217010 | — | — | — | — | |
| 15-B | Front Panel Assy | 9358865187 | 9358865132 | 9358865132 | 9358865132 | 9358865187 | |
| 647 | Switch Panel Lid | 9358097069 | 9358097014 | 9358097014 | 9358097014 | 9358097069 | |

CABINET & CHASSIS PARTS

| Ref. No. | Description | Part No. | | | | | Ord. |
|----------|------------------------------------|--------------|--------------|--------------|--------------|--------------|------|
| | | AKG9ASG-W | AKG9ASN-W | AKG9AGN-W | AKG9GSN-W | AKG9RSS-W | Q'ty |
| 18 | Cabinet Assy | 9389020067 | 9389020067 | 9389020067 | 9389020067 | 9389020067 | |
| 19 | Base Assy | 9389017081 | 9389017029 | 9389017029 | 9389017029 | 9389017098 | |
| 20 | Supporter-C | 9358091005 | 9358091005 | 9358091005 | 9358091005 | 9358091005 | |
| 21 | Exhaust Damper | 9358094051 | 9358094020 | 9358094020 | 9358094020 | 9358094051 | |
| 29 | Supporter-B | 9358089002 | 9358089002 | 9358089002 | 9358089002 | 9358089002 | |
| 30 | Blower Mouth | 9358084007 | 9358084007 | 9358084007 | 9358084007 | 9358084007 | |
| 38 | Switch Box-A Assy | 313107242805 | 313107242805 | 313107242805 | 313555242850 | 9358335017 | |
| 39 | Switch Panel | 9358134139 | 9358134016 | 9358134016 | 9358134023 | 9358134146 | |
| 44-1 | Capacitor Band (Running Capacitor) | 313306061707 | 313106061706 | 313106061706 | 313106061706 | 313106061706 | |
| 56 | Sirocco Fan | 9358107010 | 9358107010 | 9358107010 | 9358107010 | 9358107010 | |
| 56-1 | Nut For Sirocco Fan | 9358135006 | 9358135006 | 9358135006 | 9358135006 | 9358135006 | |
| 58 | Propeller Fan | 9358106013 | 9358106013 | 9358106013 | 9358106013 | 9358106013 | |
| 59 | Operation Switch | 9370012026 | 9370012026 | 9370012026 | 9370012026 | 9351214029 | |
| 60 | Thermostat | 9900065034 | 9900065034 | 9900065034 | 9900065010 | 9354392007 | |
| 61 | Power Cord Assy | 9703286025 | 9703286025 | 9703286025 | 9703286025 | 9358286087 | |
| 62 | Fan Motor Assy | 9601077022 | 9601077022 | 9601077022 | 9601077022 | 9601077046 | |
| 63 | Protection Tube-B (Thermostat) | — | — | — | — | 313152149608 | |
| 64 | Capacitor (Fan Motor) | 9703124013 | 9350974016 | 9350974016 | 9350974016 | 9703306105 | |
| 67 | Rubber (Vibration-proof) | 313106068602 | 313106068602 | 313106068602 | 313106068602 | 313106068602 | |
| 67-2 | Rubber-B (Vibration-proof) | 9358306000 | 9358306000 | 9358306000 | 9358306000 | 9358306000 | |
| 69 | Protection Tube | 313310060308 | 313310060308 | 313310060308 | 313310060308 | — | |
| 71 | Thermostat Knob | 9358105047 | 9058105016 | 9058105016 | 9058105016 | 9358105054 | |
| 72 | Knob Spring (Thermostat Knob) | 313008061010 | 313008061010 | 313008061010 | 313008061010 | 313008061010 | |
| 99 | Drain Pan | 9358086001 | 9358086001 | 9358086001 | 9358086001 | 9358086001 | |
| 105 | Compressor Assy | 9367027002 | 9357492001 | 9357492001 | 9357492001 | 9359879008 | |
| 106 | Running Capacitor | 9704436078 | 9704436061 | 9704436061 | 9704436061 | 9704436054 | |
| 107 | Rubber Seat-A (For Comp.) | 9359425014 | 9370009026 | 9370009026 | 9370009026 | 9359880011 | |
| 109 | Terminal Cover (For Comp.) | 9363263008 | 9357437002 | 9357437002 | 9357437002 | 9359881018 | |
| 112 | Discharge Pipe | 9363296006 | 9358926000 | 9358926000 | 9358926000 | 9357203003 | |
| 113 | Suction Pipe Assy | 9363297003 | 9358927007 | 9358927007 | 9358927007 | 9357204000 | |
| 114 | Air Duct Pipe-E | 313252257206 | 313252257206 | 313252257206 | 313252257206 | — | |
| 115 | Capillary Tube | 9363298000 | 9358928004 | 9358928004 | 9358928004 | 9359399001 | |
| 119 | Condenser Assy | 9359920007 | 9358132012 | 9358132012 | 9358132012 | 9359397014 | |
| 120 | Evaporator Assy | 9358131015 | 9358131015 | 9358131015 | 9358131015 | 9359395010 | |
| 122 | Emblem-B (Rear) | 9358104019 | 9358104019 | 9358104019 | 9358104019 | 9358104019 | |
| 126 | Condensing Pipe-B | 9363368000 | 9358923009 | 9358923009 | 9358923009 | — | |
| 127 | Inlet Pipe (Evaporator)-B | 9359748014 | 9358929001 | 9358929001 | 9358929001 | 313564019206 | |
| 128-1 | Rubber (Discharge Pipe) | 313155086308 | 313155086308 | 313155086308 | 313155086308 | 313155086308 | |
| 128-2 | Rubber (Discharge Pipe) | 313202086308 | — | — | — | — | |
| 142 | Drain Pipe | 9351674007 | 9351674007 | 9351674007 | 9351674007 | — | |

When you order parts, please make a photocopy of this page and fill the number of the parts in the "Order" column.

CABINET CHASSIS PARTS (Continued)

| Ref. No. | Description | Part No. | | | | | Ord. |
|----------|------------------------------|--------------|--------------|--------------|--------------|--------------|------|
| | | AKG9ASG-W | AKG9ASN-W | AKG9AGN-W | AKG9GSN-W | AKG9RSS-W | Q'ty |
| 151 | Front Panel Screw | 313306389909 | 313306389909 | 313306389909 | 313306389909 | 313306389909 | |
| 162 | Thermostat Holder | 313616262803 | 313616262803 | 313616262803 | 313616262803 | — | |
| 163-1 | Thermostat Spring-A | 313668262714 | 313668262714 | 313668262714 | 313668262714 | — | |
| 163-2 | Thermostat Spring-A | — | — | — | — | 313728262708 | |
| 166 | Separate Wall Assy | 9358114018 | 9358114018 | 9358114018 | 9358114018 | 9358114032 | |
| 197 | Wind Guide Board | 9358092026 | 9358092026 | 9358092026 | 9358092026 | 9358092026 | |
| 200 | BR-Sheet-B | 9359189008 | 9359189008 | 9359189008 | 9359189008 | 313806108302 | |
| 200-1 | BR-Sheet-B | — | 313563108306 | 313563108306 | 313563108306 | — | |
| 200-2 | BR-Sheet-B (65 x 130 x 75) | — | — | — | — | 9351990022 | |
| 210 | Rubber Sheet-B (For Comp.) | — | — | — | — | 9359887010 | |
| 221 | Mounting Spring (For Comp.) | — | — | — | — | 9359883012 | |
| 227 | Terminal Spring | — | 9370009064 | 9370009064 | 9370009064 | — | |
| 249 | Dew Proof Plate | 313106041504 | 313106041504 | 313106041504 | 313106041504 | 313106041504 | |
| 266 | Drain Boat | — | — | — | — | 313681252701 | |
| 272 | Strainer | 9350663026 | 9350663026 | 9350663026 | 9350663026 | — | |
| 299 | Suction Pipe-B | — | — | — | — | 313565098706 | |
| 304 | Thermostat Fixture-B | — | — | — | — | 313349051500 | |
| 310 | Compressor Cover | 9364291000 | — | — | — | — | |
| 343 | Swolenoid Coil | — | — | — | — | 9704061058 | |
| 344 | 4-Way Valve | — | — | — | — | 9307555015 | |
| 389 | Rubber Sheet-C (For Comp.) | — | — | — | — | 9359888017 | |
| 407 | Clip No. 1259 | 313816345304 | 313816345304 | 313816345304 | 313816345304 | 313739340109 | |
| 411 | Supporter-A | 9358115022 | 9358115015 | 9358115015 | 9358115015 | 9358115022 | |
| 412 | Terminal Gasket (For Comp.) | 9362004008 | 9370009071 | 9370009071 | 9370009071 | 9359882015 | |
| 413 | Overload Relay | 9359927013 | 9370009057 | 9370009057 | 9370009057 | 9359885016 | |
| 444 | Capillary Assy | — | — | — | — | 9359401001 | |
| 456 | Casing | 9358082003 | 9358082003 | 9358082003 | 9358082003 | 9358082003 | |
| 460 | Suction Pipe Fixture-B | — | — | — | — | 313592374404 | |
| 461 | Clamp SKB-5M | — | — | — | — | 313152375801 | |
| 464 | Switch Box Cover-C | 9358009024 | 9358009024 | 9358009024 | 9358009024 | — | |
| 493 | Discharge Pipe-A Assy | — | — | — | — | 9359402008 | |
| 493-1 | Discharge Pipe-A Assy | — | — | — | — | 9359403005 | |
| 528 | Control Box-A | — | — | — | — | 313728265005 | |
| 551 | Defrost Cont. PCB Assy | — | — | — | — | 9703103018 | |
| 552 | Thermistor Assy | — | — | — | — | 341226300101 | |
| 553 | Power Transformer | — | — | — | — | 9701821013 | |
| 572 | Holder (Ex. Air Damp.) | 9358095027 | 9358095010 | 9358095010 | 9358095010 | 9358095027 | |
| 592 | Control Box-B | — | — | — | — | 313370265157 | |
| 622 | Bracket (Typhoon Lock) | 9355799003 | 9355799003 | 9355799003 | 9355799003 | 9355799003 | |
| 636 | Time Switch | — | — | — | 9351895013 | — | |
| 652-1 | Thermostat Holder | — | — | — | — | 313714262805 | |
| 667 | Casing-Upper | 9358088005 | 9358088005 | 9358088005 | 9358088005 | 9358088005 | |
| 816 | Wire Clamp Metal | — | — | — | — | 313584219902 | |
| 982 | Cord Clamp | 9357884004 | 9357884004 | 9357884004 | 9357884004 | 9363471007 | |

When you order parts, please make a photocopy of this page and fill the number of the parts in the "Order" column.

DEFROST CONT. PCB ASSEMBLY (Ref. No.552)

| Ref. No. | Description | Part No. | Ord. Q'ty | Ref. No. | Description | Part No. | Ord. Q'ty |
|------------|-----------------------------|------------|-----------|---------------|------------------------------------|------------|-----------|
| IC1 | IC uPD789101AMC-506-5A4 | 9703119019 | | R2,5,7,10-12, | Res. Metal 1/10W 10kohm+-5% | 0200307015 | |
| IC2 | Photo Coupler TLP621(D4)-GB | 0000117074 | | 16,18-21, | | | |
| IC3 | IC NJM7812FA | 0100462104 | | 26,27,29 | | | |
| IC4 | IC NJM7805FA | 0100462081 | | R3,4,8,13-15, | Res. Metal 1/10W 1kohm+-5% | 0201010747 | |
| IC5 | IC PST600CMTR | 0101461120 | | 22-25 | | | |
| Q1 | Xstr 2SC2712 | 0000781053 | | R6 | Res. Metal 1/10W 390ohm+-5% | 0200212647 | |
| Q2 | Xstr DTC124EKA | 0000936033 | | R9 | Res. Metal 1/10W 14kohm+-5% | 0200104157 | |
| D1-6 | Diode D1F60 | 0000208024 | | VA1 | Varistor TNR10V471K | 0000361224 | |
| D7 | Diode DAN202K | 0000684019 | | K1 | Relay JQ1P-10V | 9701794010 | |
| C1 | Cap. Elec. 25V 1000uF | 0300213278 | | X1 | Ceramic Resonator CSTS0500MG03-T | 9702840013 | |
| C2,10,19 | Cap. Elec. 25V 10uF | 0300004258 | | F1 | Fuse BET 2A-250V | 0600222550 | |
| C3-5,8,18 | Cap. Ceramic 25V 0.1uF | 0301102885 | | FH1,2 | Fuse Holder PFC5000-0502 | 0500158072 | |
| C6,7,11-17 | Cap. Ceramic 50V 0.01uF | 0300277218 | | CN1 | Plug, PCB 1-1123724-2 | 0501321512 | |
| C9 | Cap. Plastic 275V 0.022uF | 0300304037 | | CN2 | Plug, PCB B2B-XH-AM | 0500005321 | |
| C20 | Cap. Ceramic 50V 1000pF | 0300277096 | | CN3 | Plug, PCB B5P-SHF-1AA | 0500006069 | |
| R1 | Res. Metal 1W 560kohm+-5% | 0201106662 | | CN4,A-1,2 | Wire w/Connector 2P-SCN 172336-1 | 9700052012 | |
| | | | | C,B,D-1,2 | Wire w/Connector 172338-1 170072-1 | 9700051015 | |

