ORDER NO. SIMMC 0107015A3

Service Manual

Microwave Oven

simplified

INVERTER
SYSTEM INSIDE

DESTINATION	MODELS		
	NN-S551WF	NN-S451WF	NN-K571MF
QPQ		○	
HNE	○		○
TNE	○		○
YKE	○		○
MNQ	○		○
YNQ	○		○
LNK	○		○
KKE			○
KNQ			○
SNM			○
ZPE			○
RPE			○
RPK			○

Please file and use this specified manual together with the service manual for model NN-S650WF (ORDER NO. SIMMC 0007014C3) or model NN-S560WF (ORDER NO. SIMMC 0006012C3) & model NN-K366WF (ORDER NO. SIMMC 9703002C3)

Specifications:

Specifications: / Models:		NN-S551WF	NN-S451WF	NN-K571MF
Power Source:		240V AC Single Phase, 50Hz ..... For KNQ Models 230V~240V AC Single Phase, 50Hz ..... For QPQ, MNQ, YNQ Models 220V AC Single Phase, 50Hz ..... For HNE, TNE, YKE, KKE, ZPE, RPE Models 220V~230V AC Single Phase, 60Hz ..... For LNK Models 220V AC Single Phase, 50/60Hz ..... For SNM Models 220V AC Single Phase, 60Hz ..... For RPK Models		
Power Requirement:	Microwave	1100W~1150W	1150W	1100W
	Heater	———	———	1100W~1300W
Output:	Microwave (ICE 705)	1000W	1000W	1000W
	Heater	———	———	1100W
Microwave Frequency:		2450MHz		
Timer:		99 min. 90 sec.	99 min. 90 sec.	99 min. 59 sec.
Outside Dimensions:		510(W) x 378(D) x 300mm(H)		510(W) x 378(D) x 306mm(H)
Oven Cavity Dimensions:		330(W) x 330(D) x 200mm(H)		330(W) x 330(D) x 200mm(H)
Weight:		11.2 kg	11.2 kg	12 kg
Output power: IEC705-88 Test Procedure				
Specifications subject to change without notice.				

National® / Panasonic®

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

WARNING

1. This product should be serviced only by trained, qualified personnel.
2. Check for radiation leakage before and after every servicing according to the "procedure for measuring radiation leakage."
3. If the unit cannot be repaired on site, advise the customer not to use until unit is repaired.
4. There are special components used in the microwave oven which are important for safety. These parts are marked with a ⚠ on the replacement parts list. It is essential that these critical parts should be replaced only with the manufacture's specified parts to prevent microwave leakage, shock, fire, or other hazards. Do not modify the orginal design.

This service manual covers products for following markets.
When troubleshooting or replacing parts, please refer to the country/area identifications shown below for your applicable product specification.

QPQ	For Australia, New Zealand
HNE	For Hong Kong
YNQ	For Singapore
MNQ	For Malaysia
TNE	For Thailand, Indonesia
LNK	For Philippines
YKE	For Others
KKE	For UAE, Egypt, Iran
KNQ	For Kuwait, Doha, Qatar Oman, Bahrain, Pakistan
SNM	For Saudi Arabia
ZPE	For CIS Countries
RPE	For Peru
RPK	For Chile

PRECAUTIONS TO BE OBSERVED BEFORE AND DURING SERVICING TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY

(A) Do not operate or allow the oven to be operated with the door open.
(B) Make the following safety checks on all ovens to be serviced before activating the magnetron or other microwave source, and make repairs as necessary:
  (1) Interlock operation
  (2) Proper door closing
  (3) Seal and sealing surfaces (arcing, wear, and other damage)
  (4) Damage to or loosening of hinges and latches.
  (5) Evidence of dropping or abuse
(C) Before turning on microwave power for any service test or inspection within the microwave generating compartments, check the magnetron, waveguide or transmission line, and cavity for proper alignment, integrity and connections.
(D) Any defective or misadjusted components in the interlock, monitor, door seal, and microwave generation and transmission systems shall be repaired, replaced, or adjusted by procedures described in this manual before the oven is released to the owner.
(E) A microwave leakage check to verify compliance with the Federal Performance Standard should be performed on each oven prior to release to the owner.

CONTENTS

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DANGER OF HIGH VOLTAGE AND HIGH TEMPERATURE (HOT/LIVE) OF THE INVERTER POWER SUPPLY (U)

INVERTER WARNING

This Inverter board looks like a regular PCB. However, this PCB drives the magnetron tube with extremely high voltage and high current. **NEW HV**

IT HAS:

1. **Very high voltage and high current circuits.**
   It functions the same as the high voltage transformer and high voltage capacitor in ordinary microwave ovens.
2. **Aluminum heat sink is energized with very high voltages and high heat energy.**
3. **Very high voltage may remain in circuitry even when oven is off. High voltage may remain in the capacitors on the board.**

DO NOT:

* 1. **Do not touch circuitry because it has very hot (high voltage) circuitry. Even when replacing board, extreme care should be taken to avoid possible electric shock hazards. High voltage may remain in circuit.**

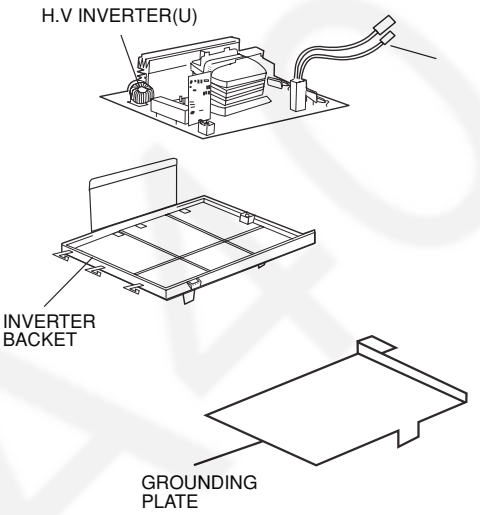
* 2. **Do not touch aluminum heat sink because it is very hot in high voltage and also very hot in high heat energy.**

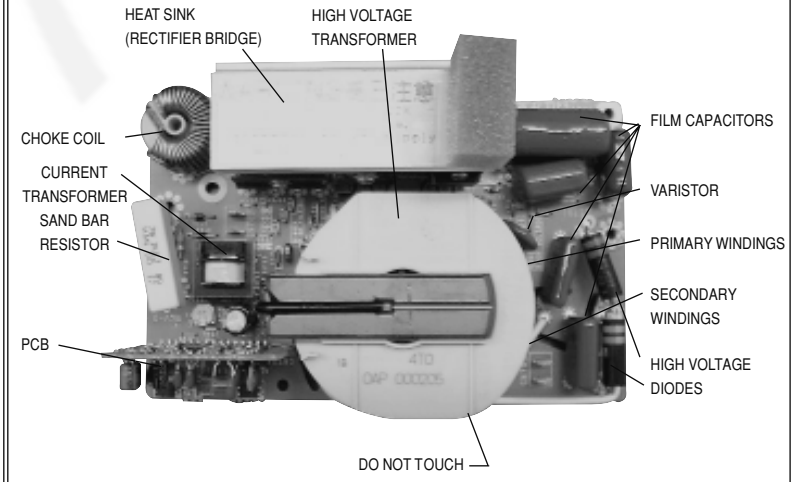
* 3. **Do not try to adjust or tamper with preset volume on the Inverter board because it is very dangerous to adjust without proper test equipment.**

* 4. **Do not test oven while Inverter grounding plate or screws are loose. It is very dangerous to operate H.V. Inverter Circuit (U) with loose mounting screws or if improperly grounded.**

* 5. **For USA only:**
   Do not try to repair Inverter PCB because it is very dangerous to repair it. Replace as whole High Voltage Inverter Circuit unit and return fully re-packed with original shipping box and shipping materials.

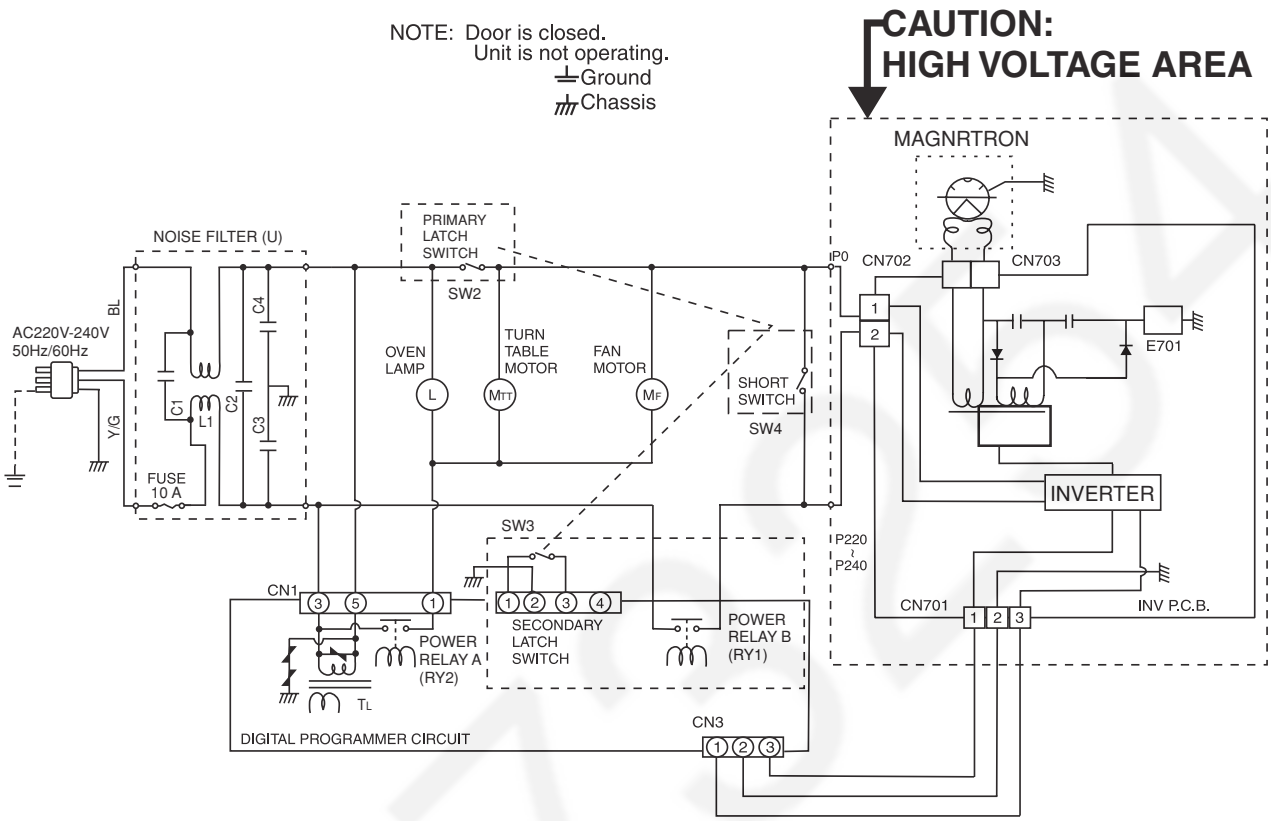
INVERTER POWER SUPPLY





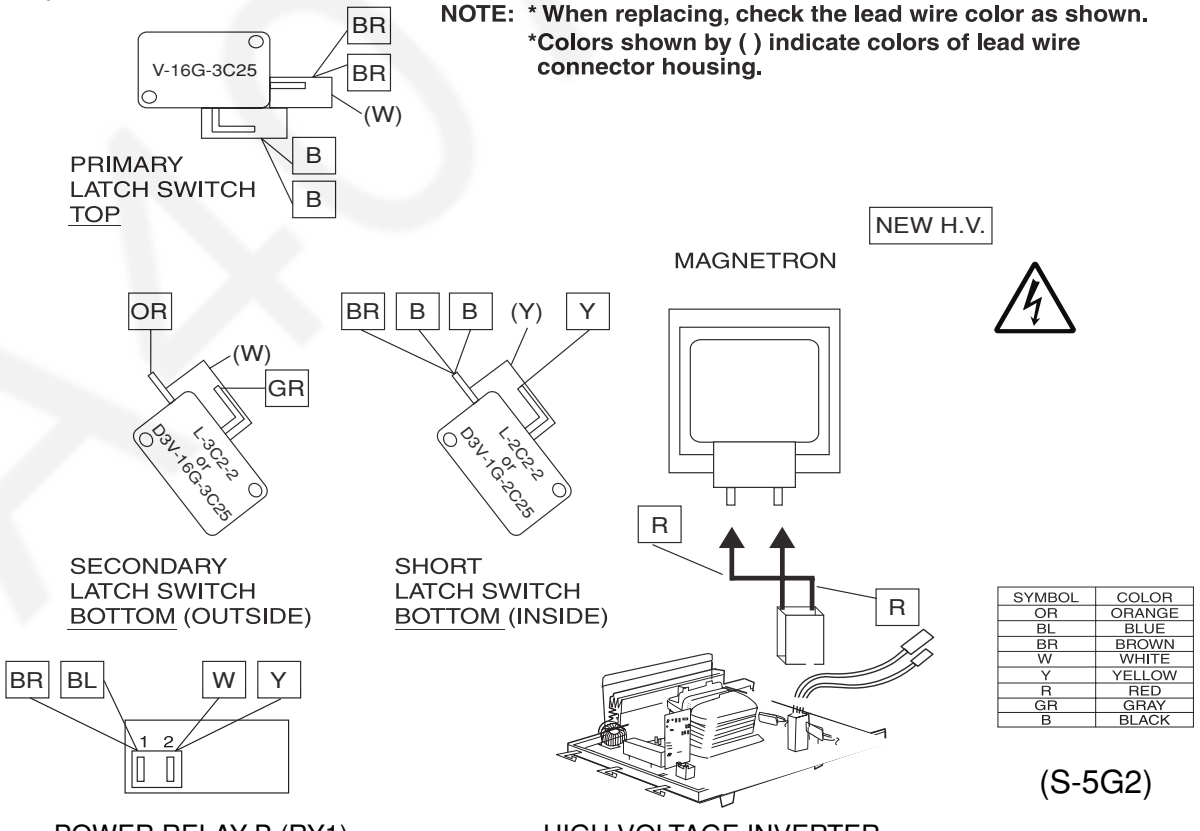
SCHEMATIC DIAGRAM

NN-S551WF/S451WF



WIRING DIAGRAM

NOTE: * When replacing, check the lead wire color as shown.
***Colors shown by ( ) indicate colors of lead wire connector housing.**

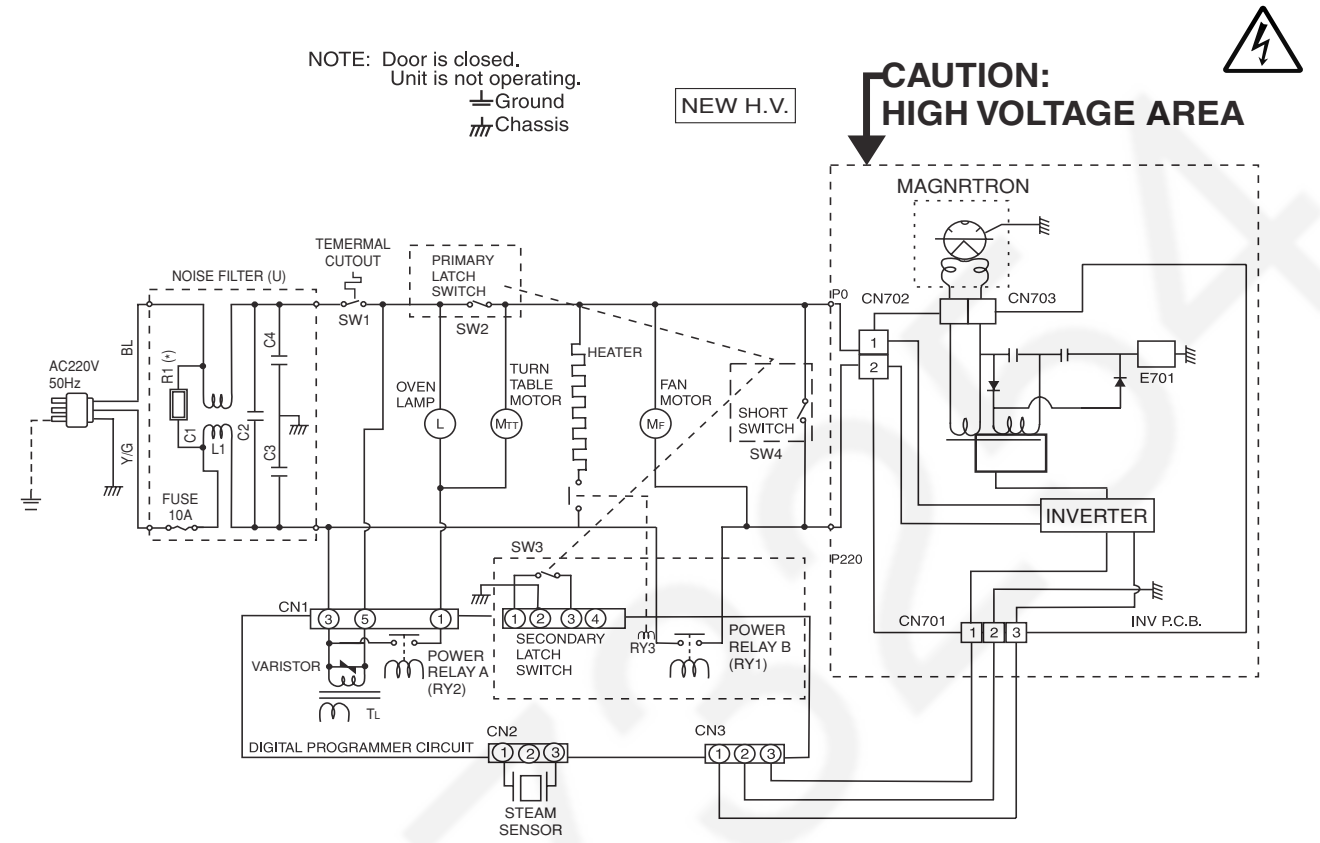


SYMBOL	COLOR
OR	ORANGE
BL	BLUE
BR	BROWN
W	WHITE
Y	YELLOW
R	RED
GR	GRAY
B	BLACK

(S-5G2)

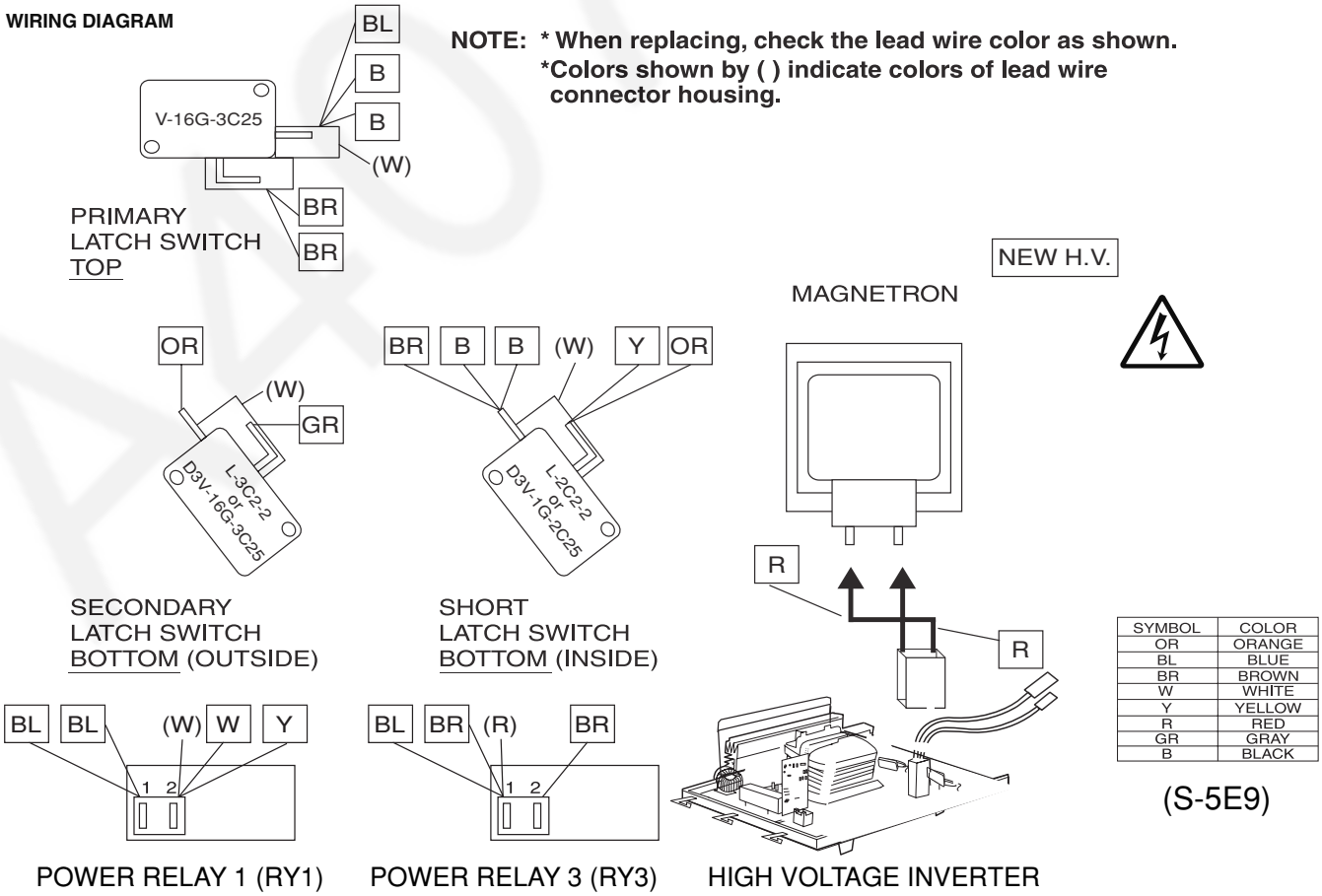
SCHEMATIC DIAGRAM

NN-K571MF



* NOTE: Only ZPE model C1 takes place R1.

WIRING DIAGRAM



SYMBOL	COLOR
OR	ORANGE
BL	BLUE
BR	BROWN
W	WHITE
Y	YELLOW
R	RED
GR	GRAY
B	BLACK

(S-5E9)

CAUTIONS TO BE OBSERVED WHEN TROUBLESHOOTING

Unlike many other appliances, the microwave oven is high-voltage, high current equipment. Though it is free from danger in ordinary use, extreme care should be taken during repair.

CAUTION
Servicemen should remove their watches whenever working close to or replacing the magnetron.

1. Check the grounding

Do not operate on a 2-wire extension cord. The microwave oven is designed to be used when grounded. When it is inoperative, make sure it is grounded properly before beginning repair work.

2. Inverter Warnings **NEW H.V.**

DANGER OF HIGH VOLTAGE AND HIGH TEMPERATURE (HOT/LIVE) OF THE INVERTER POWER SUPPLY (U)

This High Voltage Inverter Power Supply circuit supplies very high voltage and very high current for the magnetron tube. Though it is free from danger in ordinary use, extreme care should be taken during repair. As you can see, it looks like a TV flyback transformer, however the current is extremely large and so danger exists because of its high current and high voltages.

The aluminum heat sink is also energized with high voltage (HOT), so do not touch when AC input terminal is connected to the power line because one of the IGBT switching power devices (Collector) is directly connected to the Aluminum heat sink.

The Aluminum heat sink may be HOT from heat energy; therefore, extreme care should be taken during servicing and replacing.

WARNING OF INVERTER POWER SUPPLY (U) GROUNDING

Check the High Voltage Inverter Power Supply circuit grounding. This High Voltage Inverter Power Supply circuit board must have a proper chassis ground by the grounding bracket to the chassis ground; otherwise, this H.V. Inverter circuit board will expose very high voltage and cause extreme DANGER! Be sure to have proper grounding by the grounding plate and screws.

WARNING OF DISCHARGING HIGH VOLTAGE CAPACITORS

Warning about the electric charge in the high voltage capacitors. For about 30 seconds after the oven is turned off, an electric charge remains in the high voltage capacitors in the inverter power supply circuit board.

When replacing or checking parts, remove the power plug from the outlet and short the Inverter output terminal of the magnetron filament terminals to the chassis ground with an insulated handle screwdriver to discharge. Please make sure to touch chassis ground side first then short to the output terminals.

WARNING

There is high-voltage present, with high-current capabilities in the circuits of the primary, and secondary windings, choke coil and heat sink of the Inverter. It is extremely dangerous to work on or near these circuits with oven energized.

DO NOT measure the voltage in the high voltage circuit including filament voltage of magnetron.

WARNING

Never touch any circuit wiring with your hand nor with an insulated tool during operation.

3. When parts must be replaced, remove the power plug from the outlet.

4.When the 10 Amp fuse is blown due to the operation of short switch:

WARNING

When the 18 Amp. fuse if blown due to the operation of short switch, you must replace Primary latch switch and short switch. Also replace power relay B (RY1) when the continuity check reads shorted contacts (1-2).

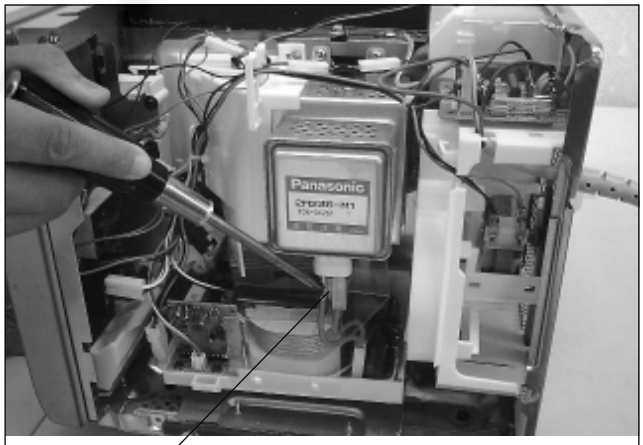
(A) This is mandatory. Refer to “Measurements and Adjustments” for these switches.

(B) When replacing the fuse, confirm that it has the appropriate rating for these models.

(C) When replacing faulty switches, be sure mounting tabs are not bent, broken or otherwise deficient in their ability to hold the switches.

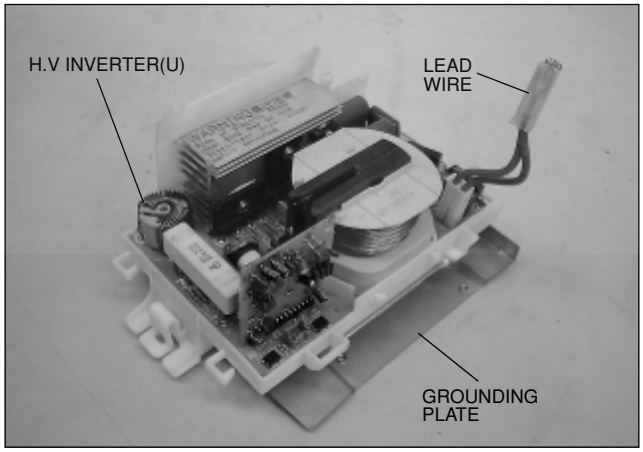
5.Avoid inserting nails, wire, etc. through any holes in the unit during operation.

Never insert a wire, nail or any other metal object through the lamp holes on the cavity or any other holes or gaps, because such objects may work as an antenna and cause microwave leakage.



MAGNETRON
FILAMENT TERMINAL

Touch chassis side first then short to the terminal of the magnetron filament terminal.



6.Confirm after repair

(A) After repair or replacement of parts, make sure that the screws of the oven, etc. are neither loose nor missing.
Microwaves might leak if screws are not properly tightened.

(B) Make sure that all electrical connections are tight before inserting the plug into the wall outlet.

(C) Check for microwave energy leakage. (Refer to procedure for measuring microwave energy leakage.)

CAUTION

MICROWAVE RADIATION

DO NOT BECOME EXPOSED TO RADIATION FROM THE MICROWAVE GENERATOR OR OTHER PARTS CONDUCTING MICROWAVE ENERGY.

IMPORTANT NOTICE **NEW H.V.**

1. The following components have potentials above 250V while the appliance is operating..
   * Magnetron
   * High voltage transformer (Located on Inverter (U))
   * High voltage diodes (Located on Inverter (U))
   * High voltage capacitors (Located on Inverter (U))

   Pay special attention on these portions.
2. When the appliance is operated with the door hinges or magnetron fixed incorrectly, the microwave leakage can reach more than 5mW/cm^2. After repair or exchange, it is very important to check if magnetron and the door hinges are correctly fixed.

MEASUREMENTS AND ADJUSTMENTS

WARNING

* For continued protection against radiation hazard, replace only with identical replacement parts(For touch models Part No. ANE6142-1450,Type No. V-16G-3C26-M for Primary latch switch; Part No. A61425180AP, Type No. L-3C2-2 for Secondary latch switch; Part No. A61785180AP, Type No. L-2C2-2 for short switch and Part. No. AEG5J1EG12B/AEG5J1EG18B, Type No. G5J-1-TP for power relay B(RY1))
* When the 10 Amp. fuse is blown due to the operation of the short switch, you must replace power relay B. Primary latch switch and the short switch. Then follow the installation procedures below.
* Interlock switch replacement－In replacing faulty switches, be sure mounting tabs are not bent, broken or otherwise deficient in their ability to hold the switches.
* Refer to schematic diagram to ensure proper connection.

1. Adjustment of Primary latch switch, Secondary latch switch and Short switch.

(A) When mounting Primary latch switch,Secondary latch switch and short switch to door hook assembly, mount the Primary latch switch, the Secondary latch switch and the short switch to the door hook assembly as shown in table.

NOTE: No specific adjustment during installation of Primary latch switch, Secondary latch switch and short switch to the door hook is necessary.

(B) When mounting the door hook assembly to the oven assembly, adjust the door hook assembly by moving it in the direction of arrow in the illustration so that the oven door will not have any play in it. Check for play in the door by pulling the door assembly. Make sure that the latch keys move smoothly after adjustment is completed. Completely tighten the screws holding the door hook assembly to the oven assembly.

(C) Reconnect the short switch and check the continuity of the monitor circuit and all latch switches again by following the components test procedures.

2. Measurement of microwave output

The output power of the magnetron can be determined by performing IEC standard test procedures. However,due to the complexity of IEC test procedures, it is recommended to test the magnetron using the simple method outlined below.

Necessary Equipment:

*1 liter beaker *Glass thermometer

*Wrist watch or stopwatch

NOTE: Check the line voltage under load.Low voltage will lower the magnetron output. Take the temperature readings and heating time as accurately as possible.

(A) Fill the beaker with exactly one liter of tap water.Stir the water using the thermometer and record the beaker's temperature. (recorded as T1).

(B) Place the beaker on the center of glass cook plate. Set the oven for High power and heat it for exactly one minute.

(C) Stir the water again and read the temperature of the beaker. (recorded as T2).

(D) The normal temperature rise at High power position for each model is as shown in table.

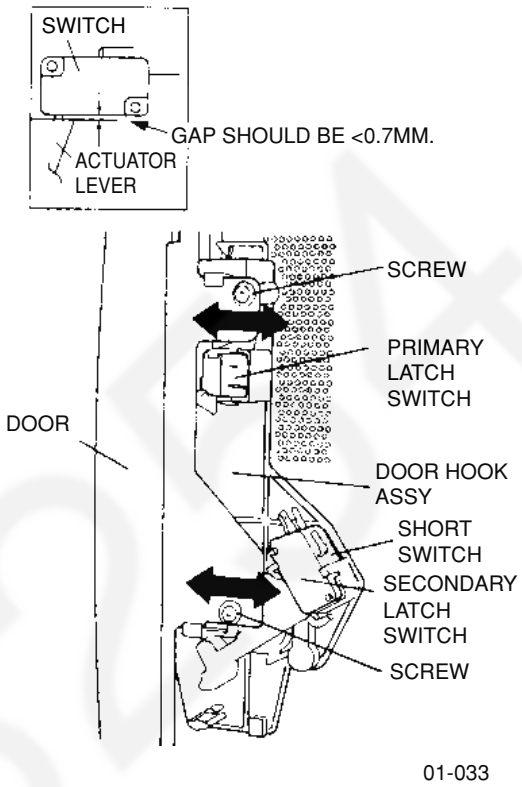
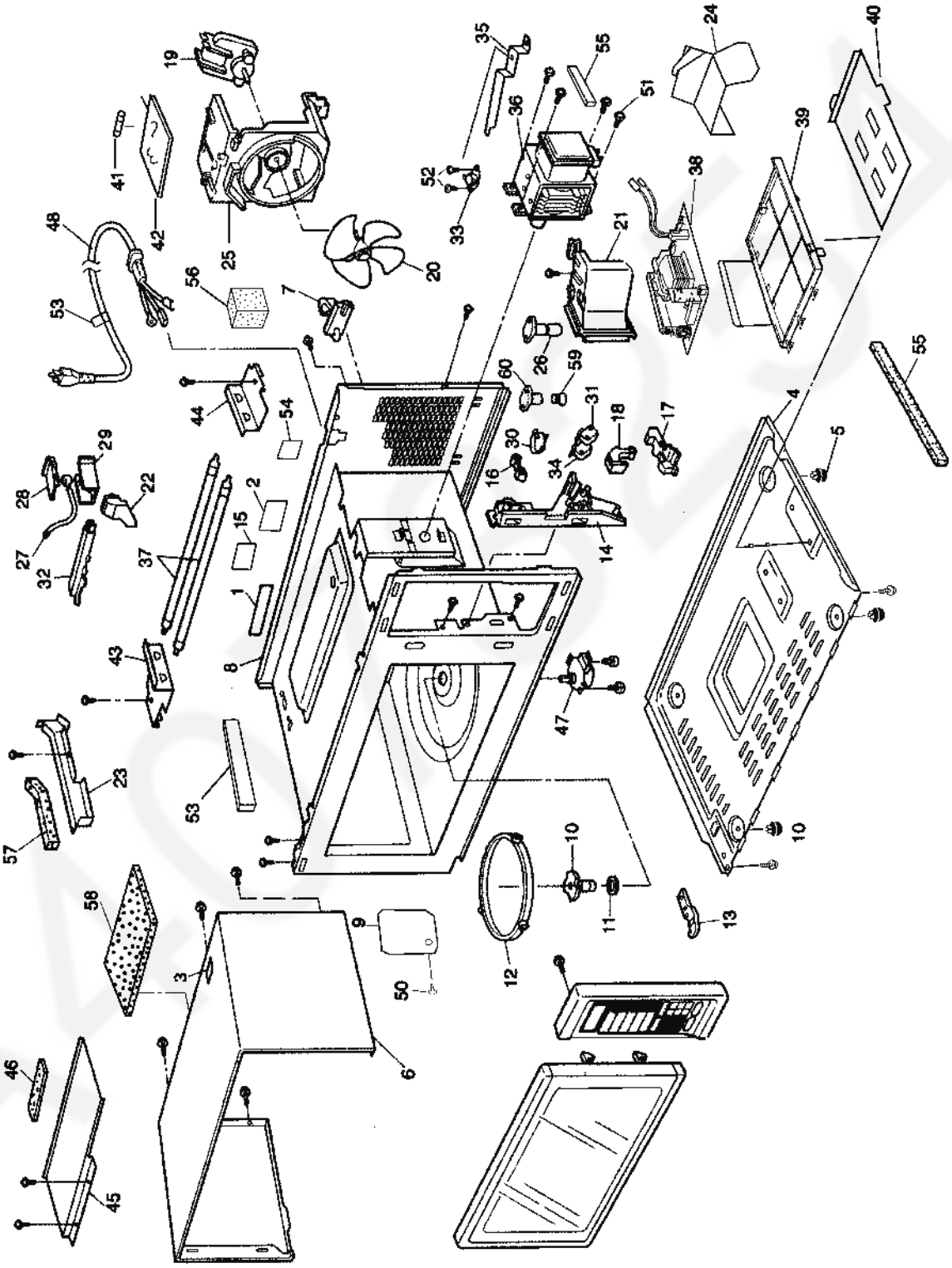


TABLE (1L-1min. test)

RATED OUTPUT	TEMPERATURE RISE
1000W(IEC705-88)	Min. 15.4˚F(8.6˚C)

EXPLODED VIEW AND PARTS LIST



EXPLODED VIEW

PARTS LIST

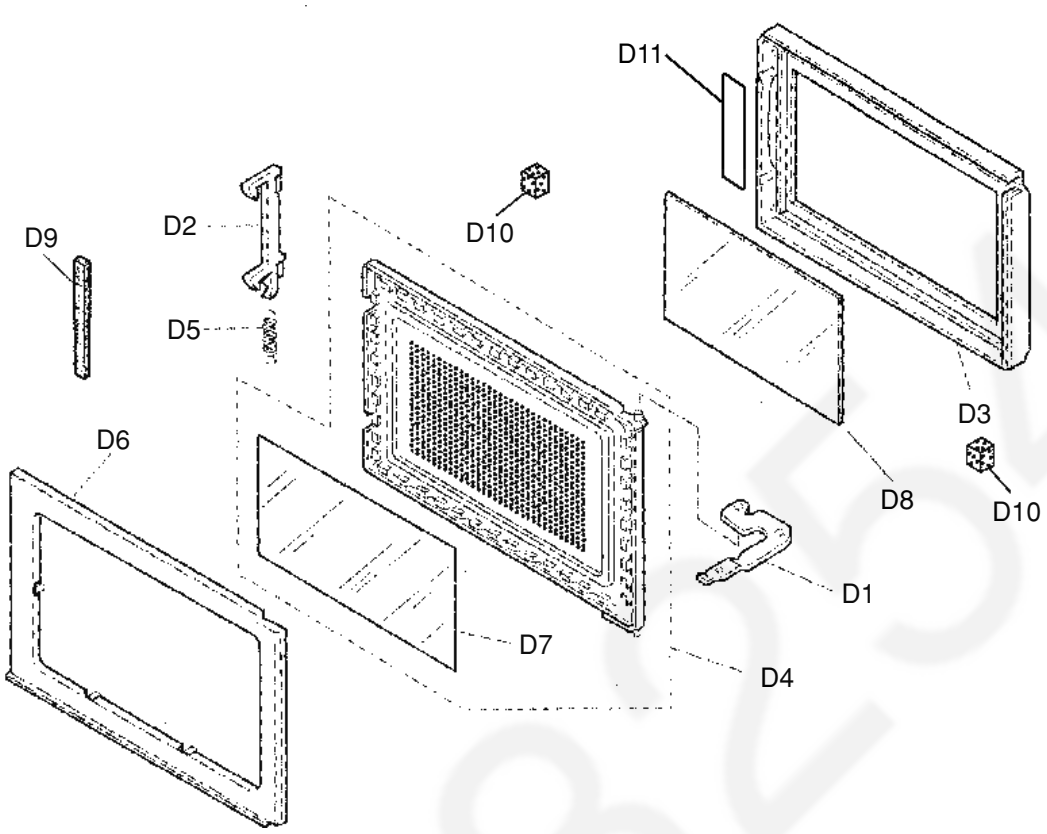
NOTE 1: When ordering replacement part(s), please use part number(s) shown in this part list.
Do not use description of the part.
2: Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety.
When replacing any of these components, use only manufacture's specified parts.

NOTE "A" parts are supplied by MOD (Japan)
"F" parts are supplied by SIMMC (China)

Ref.No.		Part No.	Part name & Description	Pcs/ Set	Remarks
1		F00075G20HHN	NAME PLATE	1	S551WF (HNE)
1		F00075G20TN	NAME PLATE	1	S551WF (TNE)
1		F00075G20HYK	NAME PLATE	1	S551WF (YKE)
1		F00075G20HMN	NAME PLATE	1	S551WF (MNQ)
1		F00075G20HYN	NAME PLATE	1	S551WF (YNQ)
1		F00075G20HLN	NAME PLATE	1	S551WF (LNK)
1		F00075G20HQP	NAME PLATE	1	S451WF (QPQ)
1		F00075E90HHN	NAME PLATE	1	K571MF (HNE)
1		F00075E90TN	NAME PLATE	1	K571MF (TNE)
1		F00075E90HYK	NAME PLATE	1	K571MF (YKE)
1		F00075E90HMN	NAME PLATE	1	K571MF (MNQ)
1		F00075E90HYN	NAME PLATE	1	K571MF(YNQ)
1		F00075E90HLN	NAME PLATE	1	K571MF (LNK)
1		F00075E90KK	NAME PLATE	1	K571MF (KKE)
1		F00075E90KN	NAME PLATE	1	K571MF (KNQ)
1		F00075E90SN	NAME PLATE	1	K571MF (SNM)
1		F00075E90ZP	NAME PLATE	1	K571MF (ZPE)
1		F00075E90RPE	NAME PLATE	1	K571MF (RPE)
1		F00075E90RPK	NAME PLATE	1	K571MF (RPK)
2		F00068100HN	CAUTION LABEL	1	HNE,TNE,YKE,MNQ,YNQ,LNK,QPQ,KKE,KNQ,SNM
2		F00065E90ZP	CAUTION LABEL	1	ZPE
2		F00065E90RP	CAUTION LABEL	1	RPE, RPK
3		F01504Y00XN	NO TOUCHING LABEL	1	K571MF
4		F10015E30XN	BASE	1	
5		F10084T00AP	RUBBER FOOT	4	
6		F110D8100HHN	CABINET BODY	1	S551WF, S451WF
6		F110D4Y00SXN	CABINET BODY	1	K571MF
7		F11407000AP	STOPPER	1	K571MF
8	⚠	F200A5E30XN	OVEN (U)	1	S551WF, S451WF
8	⚠	F200A5E40XN	OVEN (U)	1	K571MF
9		F20554H80XN	COVER	1	
10		F21314W00AP	PULLY SHAFT	1	
11		F2177-F80	WASHER	1	
12		F290D4H80XN	ROLLER RING (U)	1	
13	⚠	F30077050AP	LOWER HINGE	1	
14	⚠	F3020-1200	DOOR HOOK	1	
15		F00065540MN	CAUTION LABEL	1	YNQ
16		F3136-1200	HOOK LEVER A	1	
17		F31374650AP	HOOK LEVER B	1	
18		F31384650AP	HOOK LEVER C	1	
19		F400A4760JP	FAN MOTOR	1	EXCEPT LNK, SNM, RPK
19		A400A4000LN	FAN MOTOR	1	LNK, SNM, RPK
20		F40089660AP	FAM BLADE	1	
21		F40258100XN	AIR GUIDE A	1	
22		F40264Y00XN	AIR GUIDE B	1	K571MF
23		F40269600XN	AIR GUIDE B	1	K571MF
24		F40024Y00XN	AIR GUIDE C	1	
25		F41448100XN	ORIFICE	1	

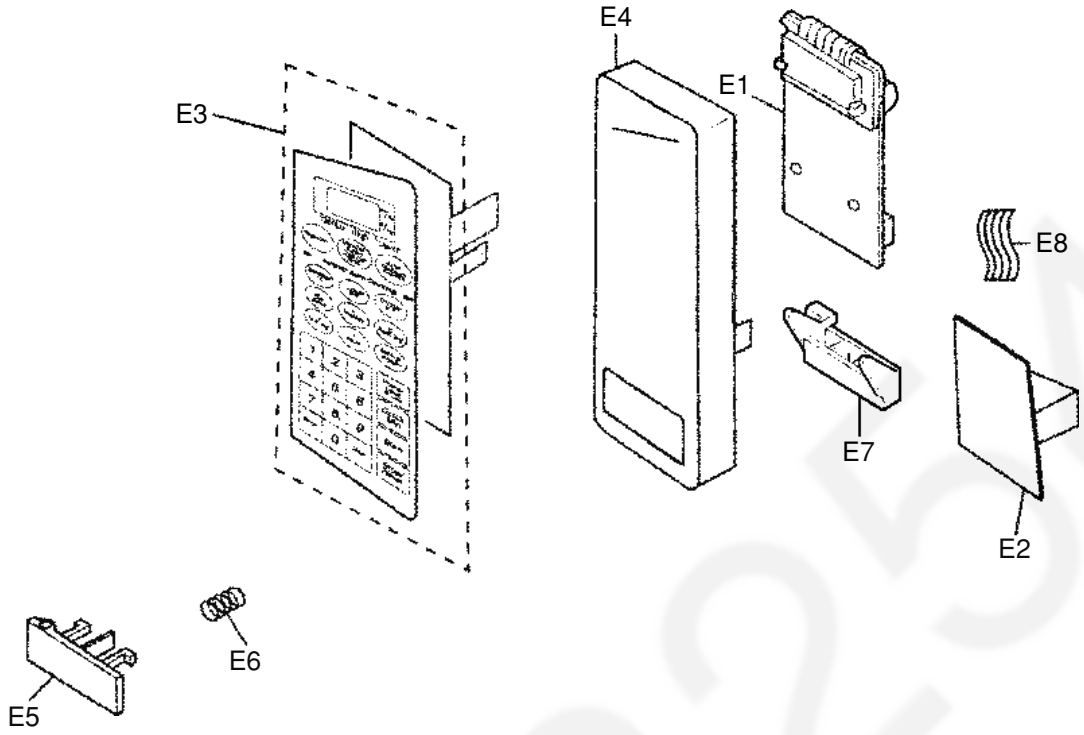
Ref.No.		Part No.	Part name & Description	Pcs/ Set	Remarks
26		F612E4J50XN	INCANDESCENT LAMP (U)	1	EXCEPT HNE
27		A607S7050AP	SENSOR	1	K571MF
28		F22139620XN	SENSOR BRACKET A	1	K571MF
29		F22149620XN	SENSOR BRACKER B	1	K571MF
30	⚠	J61424T00AP	MICRO SWITCH B	1	(V-16G-3C25-M) (PRIMARY LATCH SWITCH)
31	⚠	J61414T00AP	MICRO SWITCH A	1	(D3V-16G-3C25) (SECONDARY LATCH SWITCH)
32		F64509600XN	EXHAUST GUIDE	1	K571MF
33		F61454J60XN	THERMAL CUTOUT	1	120˚C (K571MF)
34	⚠	J61784T00AP	MICRO SWITCH C	1	(D3V-1G-2C25) (SHORT SWITCH)
35		F66266520GP	THERMAL CUTOUT MOUNTING	1	K571MF
36	⚠	2M236-M1F	MAGNETRON	1	S551WF, K571MF (EXCEPT ZPE)
36	⚠	2M236-M1G	MAGNETRON	1	S451WF, K571MF (ZPE)
37		F630G7510GP	HEATER (AU)	2	K571MF
38	⚠	A606Y4Y00GP	H.V.INVERTER (U)	1	
39		F65854W00AP	INVERTER BRACKET A	1	
40		F66625E30XN	GROUNDING PLATE	1	
41	⚠	A62304210BP	FUSE	1	10A, 250V
42		F692Y5E40XN	NOISE FILTER (U)	1	S551WF, K571MF (EXCEPT ZPE)
42		F692Y4T00QP	NOISE FILTER (U)	1	S451WF, K571MF (ZPE)
43		F64608920XN	HEATER MOUNTING PLATE	1	K571MF
44		F64604Y00XN	HEATER NOUNTING PLATE	1	K571MF
45		F40969600XN	INSULATION PLATE	1	K571MF
46		F22589600XN	ADIABATIC MATERIAL	1	K571MF
47		F63264760JP	TURNTABLE MOTOR	1	
48	⚠	F900C8790YK	AC CORD W/PLUG	1	HNE, YKE, MNQ, YNQ, KKE, KNQ
48	⚠	F900C9620TN	AC CORD W/PLUG	1	TNE, RPK
48	⚠	F900C9620LN	AC CORD W/PLUG	1	LNK
48	⚠	F900C9660QP	AC CORD W/PLUG	1	QPQ
48	⚠	F900C5E90SN	AC CORD W/PLUG	1	SNM
48	⚠	F900C5E90ZP	AC CORD W/PLUG	1	ZPE
48	⚠	F900C5E90RP	AC CORD W/PLUG	1	RPE
50		XTTFNE4+6BN	SCREW	1	FOR COVER
51		XTWFNE4+12T	SCREW	4	FOR MAGNETRON
52		XTEANE3+6B	SCREW	2	FOR THERMAL CUTOUT (K571MF)
53		F02395E20KN	CORD CAUTION LABEL	1	K571MF (KKE, KNQ, SNM)
54		F0005-4S10	EARTH LABEL	1	TNE
55		F0925000AM	CUSHION RUBBER C	1	(OVEN SIDE)
56		F0924000BD	CUSHION RUBBER C	1	(SENSOR) (K571MF)
57		F0923000AL	CUSHION RUBBER C	1	(AIR GUIDE B) (K571MF)
58		F0922000LH	CUSHION RUBBER C	1	(CABINET BODY) (K571MF)
59		F60304080BP	INCANDESCENT LAMP	1	HNE
60		A61524650AP	SOCKET	1	HNE

DOOR ASSEMBLY



Ref.No.		Part No.	Part name & Description	Pcs/ Set	Remarks
D1	⚠	F30064Y00XN	UPPER HINGE	1	
D2		F3018-1200	DOOR KEY A	1	
D3	⚠	F30015E30HXN	DOOR A	1	S551WF, S451 WF
D3	⚠	F30014Y00SXN	DOOR A	1	K571MF (EXCEPT ZPE, RPE, RPK)
D3	⚠	F30014Y00SZP	DOOR A	1	K571MF (ZPE, RPE, RPK)
D4	⚠	F302K9620XN	DOOR E (U)	1	
D5		F30214000AP	DOOR KEY SPRING	1	
D6	⚠	F30857200AP	DOOR C	1	
D7	⚠	F31454J50XN	DOOR SCREEN A	1	
D8		F31465E30XN	DOOR SCREEN B	1	S551WF
D8		F31465G20QP	DOOR SCREEN B	1	S451WF, K571MF (ZPE, RPE, RPK)
D8		F31464Y00XN	DOOR SCREEN B	1	K571MF (EXCEPT ZPE, RPE, RPK)
D9		F0922000AB	CUSHION RUBBER C	1	
D10		F06914Y00XN	RUBBER STOPPER	2	
D11		F01729660JP	CAUTION LABEL B	1	S451WF
D11		F02459660AP	DHHS LABEL	1	LNK

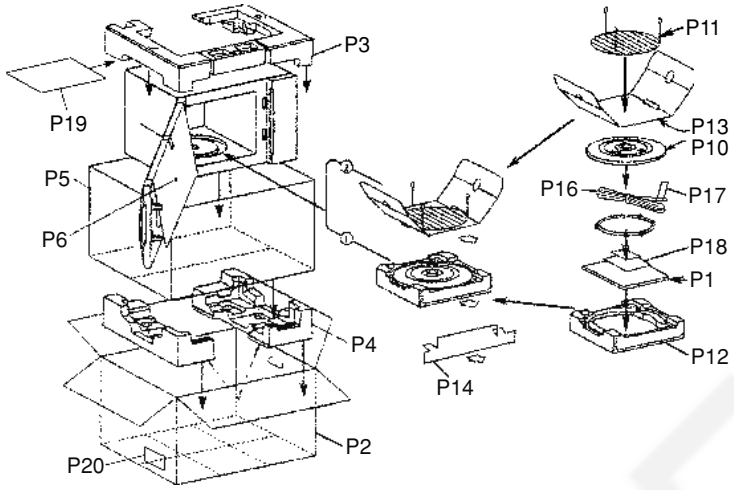
ESCUTHEON BASE ASSEMBLY



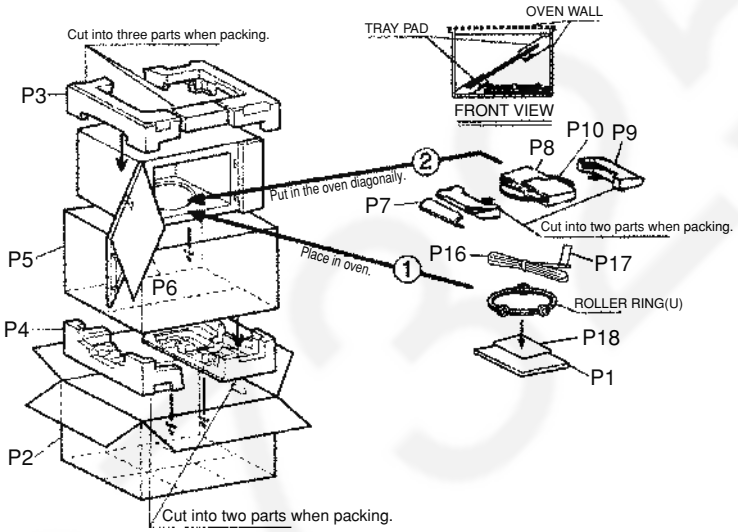
Ref.No.		Part No.	Part name & Description	Pcs/ set	Remarks
E1		F603L5G20HN	D.P.CIRCUIT AU	1	S551WF (HNE)
E1		F603L5G20TN	D.P.CIRCUIT AU	1	S551WF (TNE)
E1		F603L5G20YK	D.P.CIRCUIT AU	1	S551WF (YKE)
E1		F603L5G20MN	D.P.CIRCUIT AU	1	S551WF (MNQ, YNQ)
E1		F603L5G20LN	D.P.CIRCUIT AU	1	S551WF (LNK)
E1		F603L5G20QP	D.P.CIRCUIT AU	1	S451
E1		F603L5E90HN	D.P.CIRCUIT AU	1	K571MF (HNE, TNE)
E1		F603L5E90YK	D.P.CIRCUIT AU	1	K571MF (YKE)
E1		F603L5E90MN	D.P.CIRCUIT AU	1	K571MF (MNQ)
E1		F603L5E90YN	D.P.CIRCUIT AU	1	K571MF (YNQ)
E1		F603L5E90LN	D.P.CIRCUIT AU	1	K571MF (LNE)
E1		F603L5E90KK	D.P.CIRCUIT AU	1	K571MF (KKE)
E1		F603L5E90SN	D.P.CIRCUIT AU	1	K571MF (SNM)
E1		F603L5E90KN	D.P.CIRCUIT AU	1	K571MF (KNQ)
E1		F603L5E90ZP	D.P.CIRCUIT AU	1	K571MF (ZPE)
E1		F603L5E90RP	D.P.CIRCUIT AU	1	K571MF (RPE, RPK)
E2		F603Y5E30XN	D.P.CIRCUIT DU	1	S451WF, S551WF
E2		F603Y5E40XN	D.P.CIRCUIT DU	1	K571MF
E3		F630Y5G20HHN	MEMBRANE SWITCH	1	S551WF
E3		F630Y5G20HQP	MEMBRANE SWITCH	1	S451WF
E3		F630Y5E90SHN	MEMBRANE SWITCH	1	K571MF (HNE, TNE, YKE, MNQ, YNQ, LNK)
E3		F630Y5E90SKN	MEMBRANE SWITCH	1	K571MF (KKE, KNQ, SNM)
E3		F630Y5E90SZP	MEMBRANE SWITCH	1	K571MF (ZPE)
E3		F630Y5E90SRP	MEMBRANE SWITCH	1	K571MF (RPE, RPK)
E4		F80345E30HXN	ESCUTCHEON BASE	1	S551WF, S451WF
E4		F80345E30SXN	ESCUTCHEON BASE	1	K571MF
E5		F80725E30HXN	DOOR OPENING BUTTON	1	S551WF, S451WF
E5		F80724Y00SXN	DOOR OPENING BUTTON	1	K571MF
E6		F80375950AP	COOK BUTTON SPRING	1	
E7		F82568100XN	DOOR OPENING LEVEL	1	
E8		F66164W20AP	FLAT CABLE	1	

PACKING AND ACCESORIES

NN-K571MF

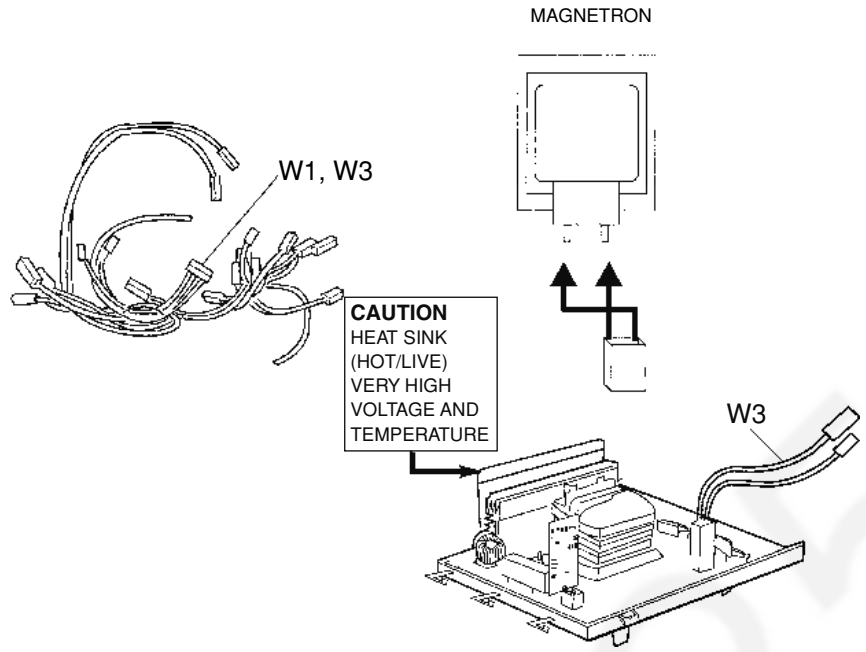


NN-S551WF/S451WF



Ref.No.		Part No.	Part name & Description	Pcs/ set	Remarks
P1		F00035G20HN	INSTRUCTION MANUAL	1	S551WF
P1		F00035G20QP	INSTRUCTION MANUAL	1	S451WF
P1		F00035E90HN	INSTRUCTION MANUAL	1	K571MF (HNE,TNE,YKE,MNQ,YNQ,LNK)
P1		F00035E90KN	INSTRUCTION MANUAL	1	K571MF (KKE,KNQ,SNM)
P1		F00035E90ZP	INSTRUCTION MANUAL	1	K571MF (ZPE)
P1		F00035E90RP	INSTRUCTION MANUAL	1	K571MF (RPE,RPK)
P2		F01025G20HHN	PACKING CASE, BOX	1	S551WF
P2		F01025G20HQP	PACKING CASE, BOX	1	S451WF
P2		F01025E90HHN	PACKING CASE, BOX	1	K571MF (HNE,TNE,YKE,MNQ,YNQ,LNK)
P2		F01025E90KN	PACKING CASE, BOX	1	K571MF (KNE,KNQ,SNM)
P2		F01025E90ZP	PACKING CASE, BOX	1	K571MF (ZPE)
P2		F01025E90RP	PACKING CASE, BOX	1	K571MF (RPE,RPK)
P3		F01045E30XN	UPPER FILLER	1	S551WF,S451WF,K571MF (EXCEPT KKE,KNQ,SNM)
P3		F01045E30KN	UPPER FILLER	1	K571MF (KKE,KNQ,SNM)
P4		F01055E30XN	LOWER FILLER	1	S551WF,S451WF,K571MF (EXCEPT KKE,KNQ,SNM)
P4		F01055E30KN	LOWER FILLER	1	K571MF (KKE,KNQ,SNM)
P5		F01068100XN	P.E.BAG	1	
P6		F01078100XN	DOOR SHEET	1	
P7		F01087220KN	TRAY PACKING A	1	S551WF,S451WF
P8		F01174800KN	TRAY PACKING B	1	S551WF,S451WF
P9		F01135690QP	TRAY STYROL	1	S551WF,S451WF
P10		A06015690QP	COOKING TRAY	1	
P11		F060V4J50XN	OVEN RACK	1	K571MF (EXCEPT KKE,KNQ,SNM)
P11		F060V5E90KN	OVEN RACK	1	K571MF (KKE,KNQ,SNM)
P12		F01139600XN	TRAY STYROL	1	K571MF
P13		F01089600XN	TRAY PACKING A	1	K571MF
P14		F01459600XN	DOOR SHEET B	1	K571MF
P16		F91644000XN	EARTH LEAD	1	TNE
P17		F00324040XN	EARTH CAUTION LABEL	1	TNE
P18		F04455G20HTN	MENU LABEL	1	S551WF (TNE)
P18		F04455G20HMN	MENU LABEL	1	S551WF (MNQ,YNQ)
P18		F04455E90HTN	MENU LABEL	1	K571MF (TNE)
P18		F04455E90HMN	MENU LABEL	1	K571MF (MNQ,YNQ)
P19		A01924T00AP	SHEET	1	K571MF
P20		F01115E90ZP	G LABEL	1	K571MF (ZPE)

WIRING MATERIALS



Ref.No.		Part No.	Part name & Description	Pcs/ Set	Remarks
W1		F030A5E30XN	LEAD WIRE HARNESS	1	S551WF
W1		F030A5G20QP	LEAD WIRE HARNESS	1	S451WF
W1		F030A5E40XN	LEAD WIRE HARNESS	1	K571MF (EXCEPT ZPE)
W1		F030A5E90ZP	LEAD WIRE HARNESS	1	K571MF (ZPE)
W3		F030E4Y00XN	H.V.LEAD WIRE	1	S551WF, K571MF (EXCEPT ZPE)
W3		F030E5E90ZP	H.V.LEAD WIRE	1	K571MF (ZPE)
W3		F030E5G20QP	H.V.LEAD WIRE	1	S451WF

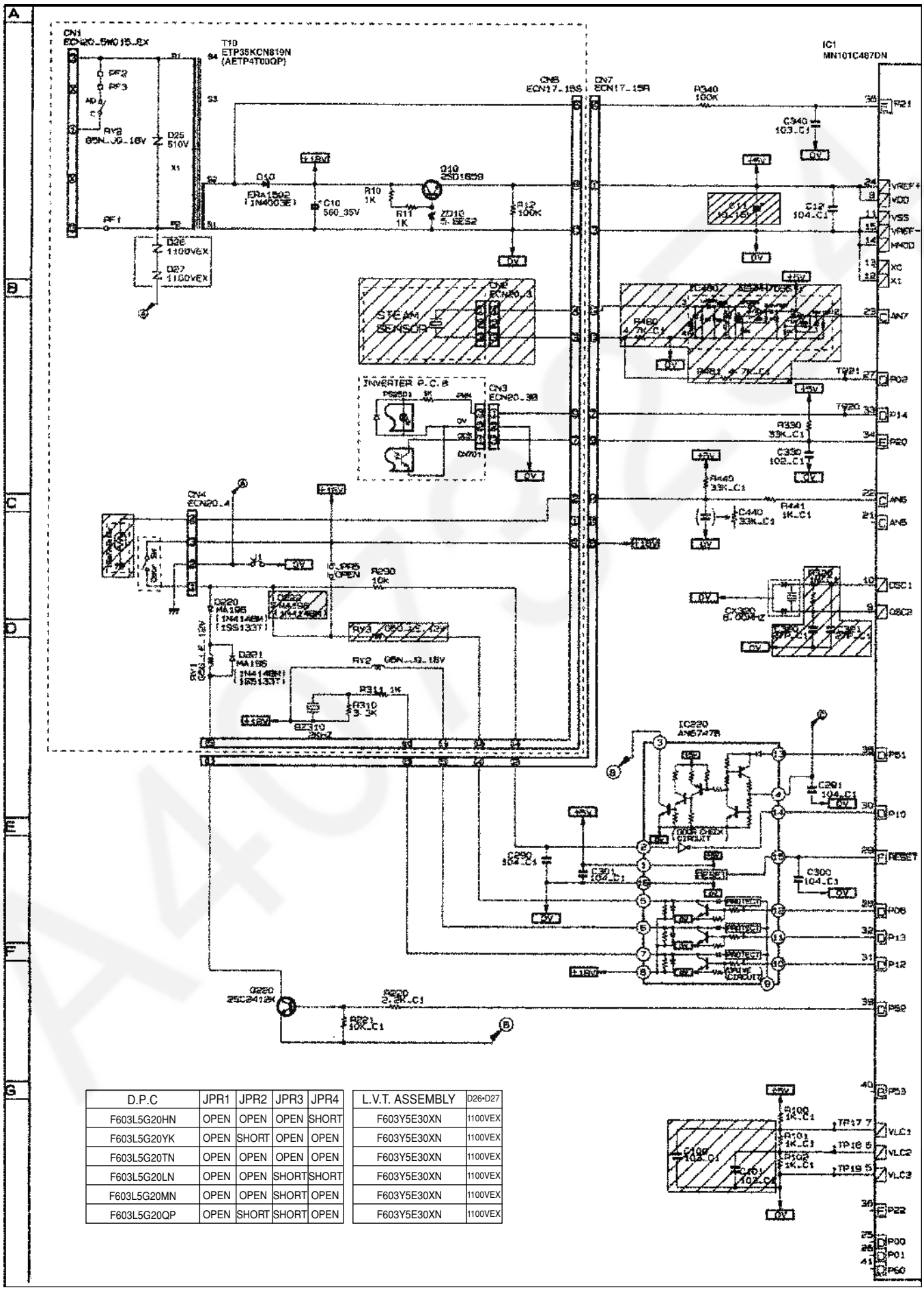
INVERTER BOARD PARTS LIST

Ref.No.		Part No.	Part name & Description	Pcs/ Set	Remarks
C701		ECWF5104N300	CAPACITOR	1	0.1μF, 500VDC
C702		ECQE2405T847	POLYESTER CAPACITOR	1	4μF, 250VDC
C703		ECWF5454N300	FILM CAPACITOR	1	0.45μF, 500VDC
C704,C705		ECWH30822JUA	FILM CAPACITOR	2	8200PF, 3KVDC
CN701		AEEMXH00703WG	CONNECTOR	1	
CT701		A66904T00AP	TRANSFORMER	1	
D701,D702	⚠	A6202-4N10T	DIODE SI	2	0.3A
D703		AEDNERA3806	DIODE SI	1	0.5A
D704,D705		AEDNERA1506	DIODE SI	2	1A
D706		MA196-(TA5)	DIODE SI	1	MA196, 0.1A
DB701		AESTRBV6206	DIODE SI	1	15A, 600V
		XTW3+12B	SCREW	2	3*12 (FOR Q701)
H.S.		A66914T00AP	HEAT SINK	1	
IC702,IC703		AEICP25011HL	IC	2	PS2501-1, HL 4P
IC801		AN9DB07SB	IC	1	
L701		A50204T00AP	COIL	1	
Q701		A691E4V10GPS	TRANSISTOR SI	1	AESCGT60M303
Q702		A691E4V10GPS	TRANSISTOR SI	1	AESPGT30J322
C806		A691E4V10GPS	CAPACITOR	1	56PF TRANSISTOR (Q701,Q702) KIT
		XTN3+12B	SCREW	1	3*12 (FOR Q702)
Q703,Q704		2SC3311AQSTA	TRANSISTOR SI	2	2SC3311AQRS
Q705		2SA1309AQSTA	TRANSISTOR SI	1	2SA1309AQRS
R715		AERGS215J452	RESISTOR	1	4.5KΩ, 15W
VR701		AEVTZBTLT102	VARIABLE RESISTOR	1	1KΩ, 308
ZD701,ZD703, ZD704,ZD705		AEDZ10ES2T1	ZENER DIODE SI	4	RD10ES2T1
ZD702		AESZ12JS2T1	ZENER DIODE SI	1	RD12JS2
T701		A609A4V00GP	TRANSFORMER	1	

DIGITAL PROGRAMMER CIRCUIT

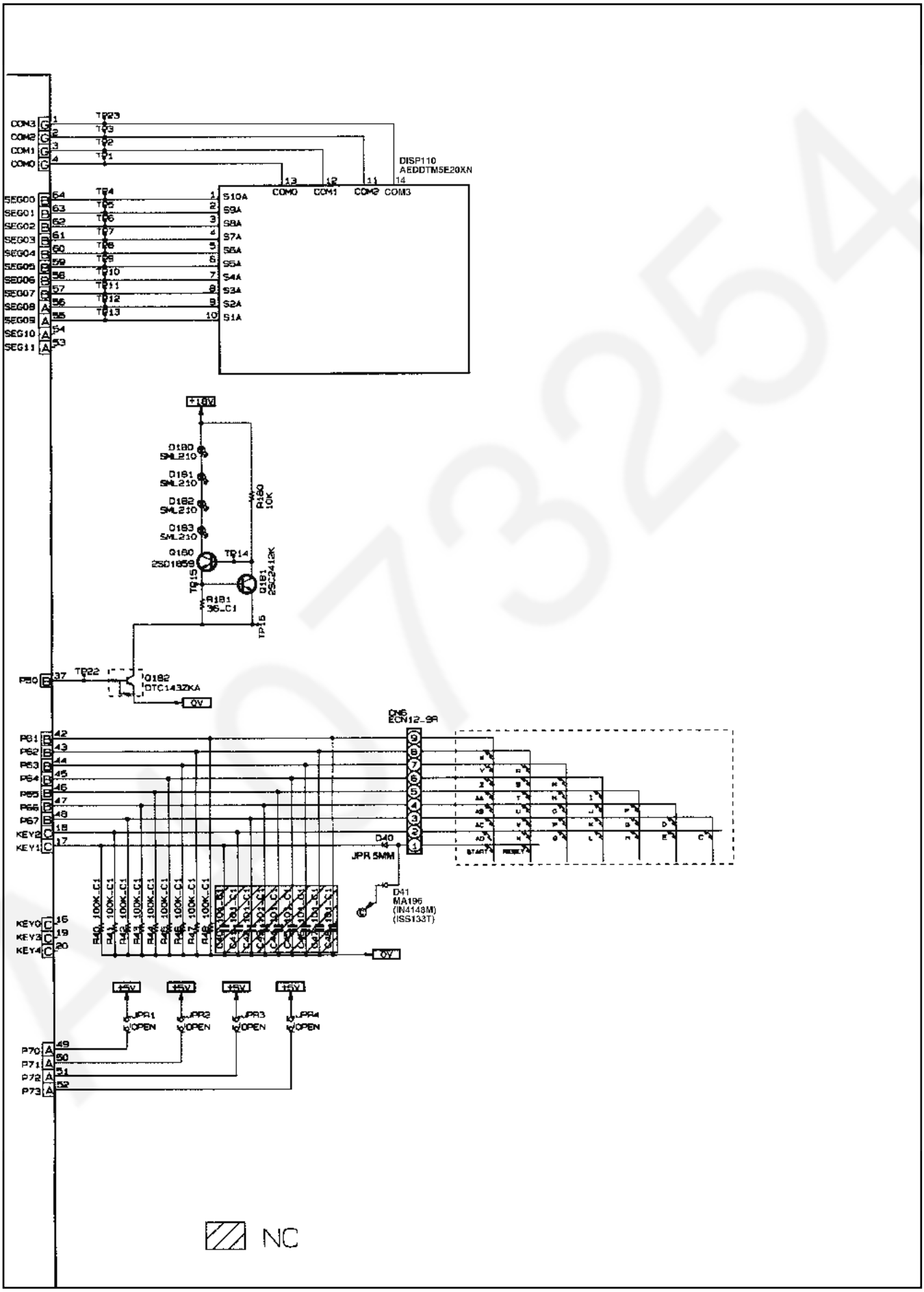
SCHEMATIC DIAGRAM

NN-S551WF/S451WF



D.P.C	JPR1	JPR2	JPR3	JPR4
F603L5G20HN	OPEN	OPEN	OPEN	SHORT
F603L5G20YK	OPEN	SHORT	OPEN	OPEN
F603L5G20TN	OPEN	OPEN	OPEN	OPEN
F603L5G20LN	OPEN	OPEN	SHORT	SHORT
F603L5G20MN	OPEN	OPEN	SHORT	OPEN
F603L5G20QP	OPEN	SHORT	SHORT	OPEN

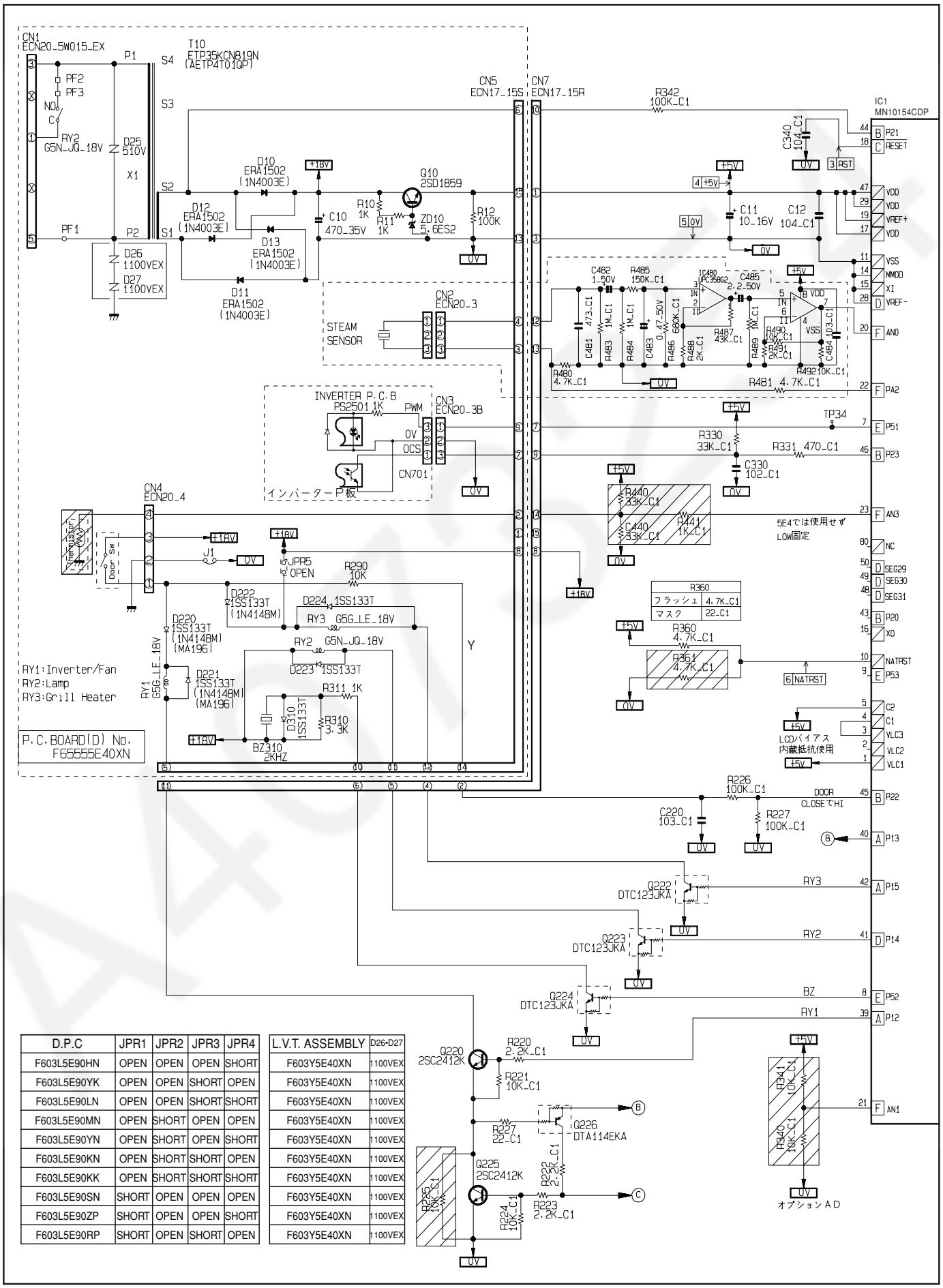
L.V.T. ASSEMBLY	D26•D27
F603Y5E30XN	1100VEX
F603Y5E30XN	1100VEX
F603Y5E30XN	1100VEX
F603Y5E30XN	1100VEX
F603Y5E30XN	1100VEX
F603Y5E30XN	1100VEX


DISP110
AEDDTM5E20XN
COM0
COM1
COM2
COM3
S10A
S9A
S8A
S7A
S6A
S5A
S4A
S3A
S2A
S1A
SEG00
SEG01
SEG02
SEG03
SEG04
SEG05
SEG06
SEG07
SEG08
SEG09
SEG10
SEG11
+16V
D180
SML210
D181
SML210
D182
SML210
D183
SML210
R180
10K
Q180
2SD1859
Q181
2SC2412K
R181
36_C1
Q182
DTC143ZKA
0V
P60
P61
P62
P63
P64
P65
P66
P67
KEY2
KEY1
KEY0
KEY3
KEY4
CN6
EGN12-9R
D40
JPR 5MM
D41
MA196
(IN4148M)
(ISS133T)
+5V
JPR1
OPEN
JPR2
OPEN
JPR3
OPEN
JPR4
OPEN
P70
P71
P72
P73
NC

DIGITAL PROGRAMMER CIRCUIT

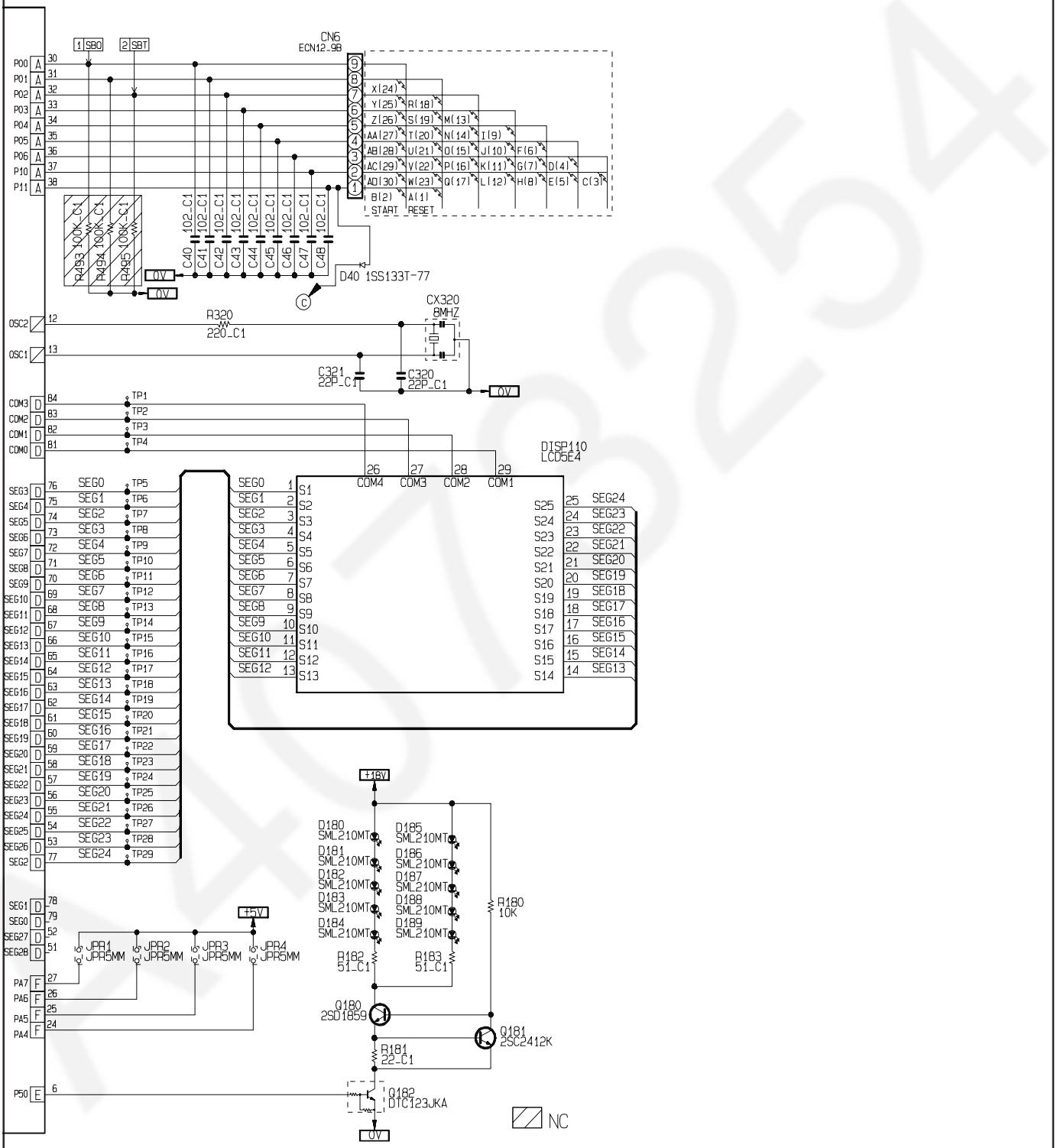
SCHEMATIC DIAGRAM

NN-K571MF



D.P.C	JPR1	JPR2	JPR3	JPR4
F603L5E90HN	OPEN	OPEN	OPEN	SHORT
F603L5E90YK	OPEN	OPEN	SHORT	OPEN
F603L5E90LN	OPEN	OPEN	SHORT	SHORT
F603L5E90MN	OPEN	SHORT	OPEN	OPEN
F603L5E90YN	OPEN	SHORT	OPEN	SHORT
F603L5E90KN	OPEN	SHORT	SHORT	OPEN
F603L5E90KK	OPEN	SHORT	SHORT	SHORT
F603L5E90SN	SHORT	OPEN	OPEN	OPEN
F603L5E90ZP	SHORT	OPEN	OPEN	SHORT
F603L5E90RP	SHORT	OPEN	SHORT	OPEN

L.V.T. ASSEMBLY	D26+D27
F603Y5E40XN	1100VEX
F603Y5E40XN	1100VEX
F603Y5E40XN	1100VEX
F603Y5E40XN	1100VEX
F603Y5E40XN	1100VEX
F603Y5E40XN	1100VEX
F603Y5E40XN	1100VEX
F603Y5E40XN	1100VEX
F603Y5E40XN	1100VEX
F603Y5E40XN	1100VEX


CN6
ECN12-9B
1 SB0
2 SBT
P00
P01
P02
P03
P04
P05
P06
P10
P11
R493 100K_C1
R494 100K_C1
R495 100K_C1
102_C1
C40
C41
C42
C43
C44
C45
C46
C47
C48
0V
D40 1SS133T-77
X(24)
Y(25)
Z(26)
AA(27)
AB(28)
AC(29)
AD(30)
R(18)
S(19)
T(20)
U(21)
V(22)
W(23)
M(13)
N(14)
O(15)
P(16)
Q(17)
I(9)
J(10)
K(11)
L(12)
F(6)
G(7)
H(8)
D(4)
E(5)
C(3)
B(2)
START
A(1)
RESET
OSC2
OSC1
R320
220_C1
CX320
8MHZ
C321
22P_C1
C320
22P_C1
COM3
COM2
COM1
COM0
TP1
TP2
TP3
TP4
DISP110
LCD5E4
SEG0
SEG1
SEG2
SEG3
SEG4
SEG5
SEG6
SEG7
SEG8
SEG9
SEG10
SEG11
SEG12
SEG13
SEG14
SEG15
SEG16
SEG17
SEG18
SEG19
SEG20
SEG21
SEG22
SEG23
SEG24
TP5
TP6
TP7
TP8
TP9
TP10
TP11
TP12
TP13
TP14
TP15
TP16
TP17
TP18
TP19
TP20
TP21
TP22
TP23
TP24
TP25
TP26
TP27
TP28
TP29
S1
S2
S3
S4
S5
S6
S7
S8
S9
S10
S11
S12
S13
S14
S15
S16
S17
S18
S19
S20
S21
S22
S23
S24
S25
+18V
D180 SML210MT
D181 SML210MT
D182 SML210MT
D183 SML210MT
D184 SML210MT
D185 SML210MT
D186 SML210MT
D187 SML210MT
D188 SML210MT
D189 SML210MT
R180 10K
R182 51_C1
R183 51_C1
Q180 2SD1859
Q181 2SC2412K
R181 22_C1
Q182 DTC123JKA
+5V
JPR1 JPR5MM
JPR2 JPR5MM
JPR3 JPR5MM
JPR4 JPR5MM
PA7
PA6
PA5
PA4
P50
NC

DIGITAL PROGRAMMER CIRCUIT

PARTS LIST

NN-S551WF/S451WF

Ref No.	Part No.	Part name & Description	Pcs/ Set	REMARKS
BZ310	AEFB22EP20TL	BUZZER	1	2.0KHz
C10	ECEA1VU561YE	AL CHEM CAPACITOR	1	560μF/35V
C12,C290,C291, C300,C301	AECU82F104ZK	CHIP CAPACITOR	5	0.1PF/25V
C320,C321	ECJ1VC1H270J	CHIP CAPACITOR	1	27PF/50V (YKE)
C330	AECU85C102KK	CHIP CAPACITOR	1	1000PF/50V
C340	AECU85F103ZK	CHIP CAPACITOR	2	0.01μF/50V
CN1	AEEMXF01505W	CONNECTOR	1	
CN3	F03525E30XN	CONNECTOR	1	
CN4	F03535E30XN	CONNECTOR	1	
CN5	AEEM9604S15C	CONNECTOR	1	
CN6	AEEM09FDZSTM	CONNECTOR	1	
CN7	AEEM9604S15F	CONNECTOR	1	
CX320	AEFOS800MG06	RESONATOR	1	8.00MHz (EXCEPT YKE)
CX320	AEYXAT49-8MA	RESONATOR	1	8.00MHz (YKE)
D10	AEDNERA1502	DIODE, SI	1	
D41,D220	AESS133T-77	DIODE, SI	2	
D25	AERZ511NS10D	VARISTOR	1	
D26,D27	AERZB00NS10D	VARISTOR	2	
DISP110	AEDDTM5E20XN	LCD	1	
	F67525E30XN	DIFFUSION SHEET	1	
DISP1 HOLDER	F66174U20AP	LCD HOLDER	1	
D180-D183	AESQHS0805UY	CHIP LED	4	
IC1	MN101C487DN	L.S.I.	1	
IC220	AN6747B	IC	1	
Q10,Q180	2SD1859TV2Q	TRANSISTOR	2	
Q181,Q220	2SC2412KT146	CHIP TRANSISTOR	2	
Q182	AESC43ZKE	CHIP DIGI-TRANSISTOR	1	
R441	AERJ3GSYJ102	CHIP RESISTOR	3	1K,1/16W,5%
R100,R101, R102,R221	AERJ3GSYJ103	CHIP RESISTOR	1	10K,1/16W,5%
R40-R48	AERJ3GSYJ104	CHIP RESISTOR	4	100K,1/16W,5%
R320	AERJ3GSYJ105	CHIP RESISTOR	1	1M,1/16W,5% (YKE)
R220	AERJ3GSYJ222	CHIP RESISTOR	1	2.2K,1/16W,5%
R330,R440,C440	AERJ3GSYJ333	CHIP RESISTOR	3	33K,1/16W,5%
R181	AERJ3GSYJ360	CHIP RESISTOR	3	36Ω,1/16W,5%
R10,R11,R331	RD16ST102J	CARBON FILM RESISTOR	3	1K,1/4W,5%
R180,R290	RD16ST103J	CARBON FILM RESISTOR	2	10K,1/4W,5%
R12,R340	RD16ST104J	CARBON FILM RESISTOR	1	100K,1/4W,5%
R310	RD16ST332J	CARBON FILM RESISTOR	1	3.3K,1/4W,5%
RY1	AEGG5G1A12	POWER RELAY	1	
RY2	AEBJQ1A18	POWER RELAY	1	
T1	AETP4T00QP	LOW VOLTAGE TRANSFORMER	1	
ZD10	AESZMTZJ5R6B	ZENER DIODE	1	

NN-K571MF

Ref No.	Part No.	Part name & Description	Pcs/ Set	REMARKS
BZ310	AEFB22EP20TL	BUZZER	1	2.0KHz
C10	AECEUS1V471A	AL CHEM CAPACITOR	1	470μF/35V
C482	AECESS1H010A	AL CHEM CAPACITOR	1	1μF/50V
C483	AECESS1HR47A	AL CHEM CAPACITOR	1	0.47μF/50V
C485	AECESS1H2R2A	AL CHEM CAPACITOR	1	2.2μF/50V
C12,C340	AECU82F104ZK	CHIP CAPACITOR	2	0.1μF/25V
C221,C484	AECU85F103ZK	CHIP CAPACITOR	2	0.01μF/50V
C481	AECU85F473ZK	CHIP CAPACITOR	1	0.047μF/50V
C320,C321	AECU1C220J50	CHIP CAPACITOR	2	22PF/50V
C40-C48,C330	AECU85C102KK	CHIP CAPACITOR	10	1000PF/50V
CN1	AEEMXF01505W	CONNECTOR	1	5 pin
CN2	AEEMMF00703W	CONNECTOR	1	3 pin
CN3	F03525E30XN	CONNECTOR	1	3 pin
CN4	F03535E30XN	CONNECTOR	1	4 pin
CN5	AEEM9604S15C	CONNECTOR	1	15 pin
CN6	AEEM09FDZSTM	CONNECTOR	1	9 pin
CN7	AEEM9604S15F	CONNECTOR	1	15 pin
CX320	AEYXAT49-8MA	RESONATOR	1	8.00MHz
D10,D11,D12,D13	AEDNERA1502	DIODE, SI	4	
D20,D21,D22,D23, D24,D310,D40	AESS133T-77	DIODE, SI	7	
D25	AERZ511NS10D	VARISTOR	1	
D26,D27	AERZB00NS10D	VARISTOR	2	
DISP110	AEDDTM5E40XN	LCD	1	
SP1	F66175E40XN	LCD HOLDER	1	
	F67525E40XN	DIFFUSION SHEET	1	
D180-D189	AESQSML210MT	CHIP LED	10	
IC1	MN101C54CDP	L.S.I.	1	
IC480	AEICUPC358G2	IC	1	
Q10,Q180	2SD1859TV2Q	TRANSISTOR	2	
Q181,Q220,Q225	2SC2412KT146	CHIP TRANSISTOR	3	
Q226	AESA14EKE	CHIP DIGI-TRANSISTOR	1	
Q182,Q222, Q223,Q224	AESC23JKE	CHIP DIGI-TRANSISTOR	4	
R182,R183	AERJ3GSYJ101	CHIP RESISTOR	2	100Ω,1/16W,5%
R224,R490,R492	AERJ3GSYJ103	CHIP RESISTOR	3	10K,1/16W,5%
R221,R226,R228, R342,R343	AERJ3GSYJ104	CHIP RESISTOR	5	100K,1/16W,5%
R483,R484,R489	AERJ3GSYJ105	CHIP RESISTOR	3	1M,1/16W,5%
R485	AERJ3GSYJ154	CHIP RESISTOR	1	150K,1/16W,5%
R488,R491	AERJ3GSYJ202	CHIP RESISTOR	2	2K,1/16W,5%
R181,R227,R360	AERJ3GSYJ220	CHIP RESISTOR	3	22Ω,1/16W,5%
R320	AERJ3GSYJ221	CHIP RESISTOR	1	220Ω,1/16W,5%
R220,R222,R223	AERJ3GSYJ222	CHIP RESISTOR	3	2.2K,1/16W,5%
R330	AERJ3GSYJ333	CHIP RESISTOR	1	33K,1/16W,5%
R487	AERJ3GSYJ433	CHIP RESISTOR	1	43K,1/16W,5%
R331	AERJ3GSYJ471	CHIP RESISTOR	1	470Ω,1/16W,5%
R480,R481	AERJ3GSYJ472	CHIP RESISTOR	2	4.7K,1/16W,5%
R486	AERJ3GSYJ684	CHIP RESISTOR	1	680K,1/16W,5%
R10,R11,R311	RD16ST102J	CARBON FILM RESISTOR	3	1K,1/4W,5%
R180,R290	RD16ST103J	CARBON FILM RESISTOR	2	10K,1/4W,5%
R12	RD16ST104J	CARBON FILM RESISTOR	1	100K,1/4W,5%
R310	RD16ST332J	CARBON FILM RESISTOR	1	3.3K,1/4W,5%
RY1,RY3	AEGG5G1A18	POWER RELAY	2	
RY2	AEBJQ1A18	POWER RELAY	1	
T10	AETP4T00QP	LOW VOLTAGE TRANSFORMER	1	
ZD10	AESZMTZJ5R6B	ZENER DIODE	1	

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