

# SHARP

## SUPPLEMENTAL SERVICE MANUAL

S20M321R14OTXY

### OVER THE RANGE MICROWAVE MODEL

## R-1514TY



**THIS IS A SUPPLEMENTAL SERVICE MANUAL FOR MODEL R-1514TY USING THE STANDBY POWER CIRCUIT.**

**MODELS NOT USING STANDBY POWER, PLEASE REFER TO SERVICE MANUAL:  
(R-1405-T/1406-T & R-1514-T) - S20M321R14OTX**

**THESE MODELS ARE SIMILAR TO ORIGINAL BASE MODELS R-1500 & R-1501.**

In the interest of user-safety the unit should be restored to its original condition and only parts identical to those specified should be used.

**WARNING TO SERVICE PERSONNEL:**

**This service manual is intended for use by persons having electrical and mechanical training and a level of knowledge of these subjects generally considered acceptable in the appliance repair trade. Sharp Electronics Corporation cannot be responsible, nor assume any liability, for injury or damage of any kind arising from the use of this manual.**

Microwave ovens contain circuitry capable of producing very high voltage and current. Contact with the following parts may result in a severe, possibly fatal, electrical shock. (High Voltage Capacitor, High Voltage Power Transformer, High Voltage Rectifier, Heat sink, Magnetron, and High Voltage Harness etc..)

## SHARP ELECTRONICS CORPORATION

This document has been published to be used for after sales service only. The contents are subject to change without notice.

# SUPPLEMENTAL SERVICE MANUAL

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## OVER THE RANGE MICROWAVE OVEN

R-1514TY

### FOREWORD

This Manual has been prepared to provide Sharp Electronics Corp. Service Personnel with Operation and Service Information for the SHARP OVER THE RANGE MICROWAVE OVENS using the Standby Power Circuit.

It is recommended that service personnel carefully study the entire text of this manual so that they will be qualified to render satisfactory customer service.

Check the interlock switches and the door seal carefully. Special attention should be given to avoid electrical shock and microwave radiation hazard.

### WARNING

Never operate the oven until the following points are ensured.

- (A) The door is tightly closed.
- (B) The door brackets and hinges are not defective.
- (C) The door packing is not damaged.
- (D) The door is not deformed or warped.
- (E) There is not any other visible damage with the oven.

Servicing and repair work must be carried out only by trained service personnel.

### DANGER

**Certain initial parts are intentionally not grounded and present a risk of electrical shock only during servicing. Service personnel - Do not contact the following parts while the appliance is energized; High Voltage Capacitor, Power Transformer, Magnetron, High Voltage Rectifier Assembly, High Voltage Harness; If provided, Vent Hood, Fan assembly, Cooling Fan Motor.**

All the parts marked “\*” on parts list are used at voltages more than 250V.

Removal of the outer wrap gives access to voltage above 250V.

All the parts marked “Δ” on parts list may cause undue microwave exposure, by themselves, or when they are damaged, loosened or removed.

## BEFORE SERVICING

Before servicing an operative unit, perform a microwave emission check as per the Microwave Measurement Procedure outlined in this service manual.

If microwave emissions level is in excess of the specified limit, contact SHARP ELECTRONICS CORPORATION immediately @ 1-800-237-4277.

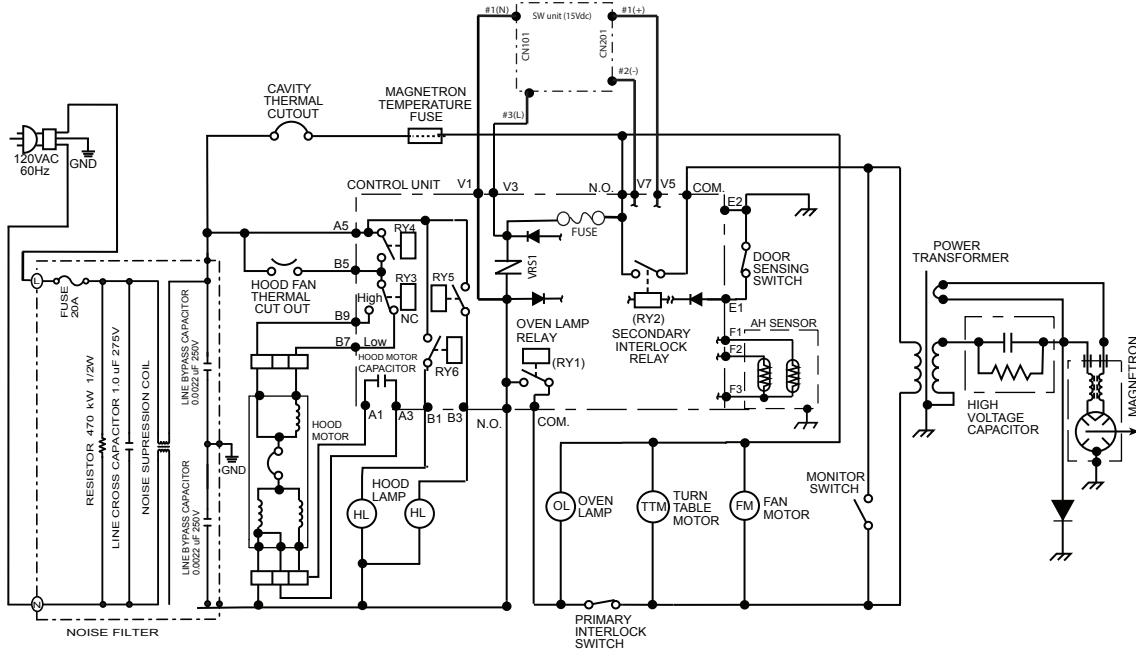
If the unit operates with the door open, service person should 1) tell the user not to operate the oven and 2) contact SHARP ELECTRONICS CORPORATION and Food and Drug Administration's Center for Devices and Radiological Health immediately.

Service personnel should inform SHARP ELECTRONICS CORPORATION of any certified unit found with emissions in excess of 4mW/cm<sup>2</sup>. The owner of the unit should be instructed not to use the unit until the oven has been brought into compliance.

SHARP ELECTRONICS CORPORATION

SHARP PLAZA, MAHWAH,  
NEW JERSEY 07430-2135

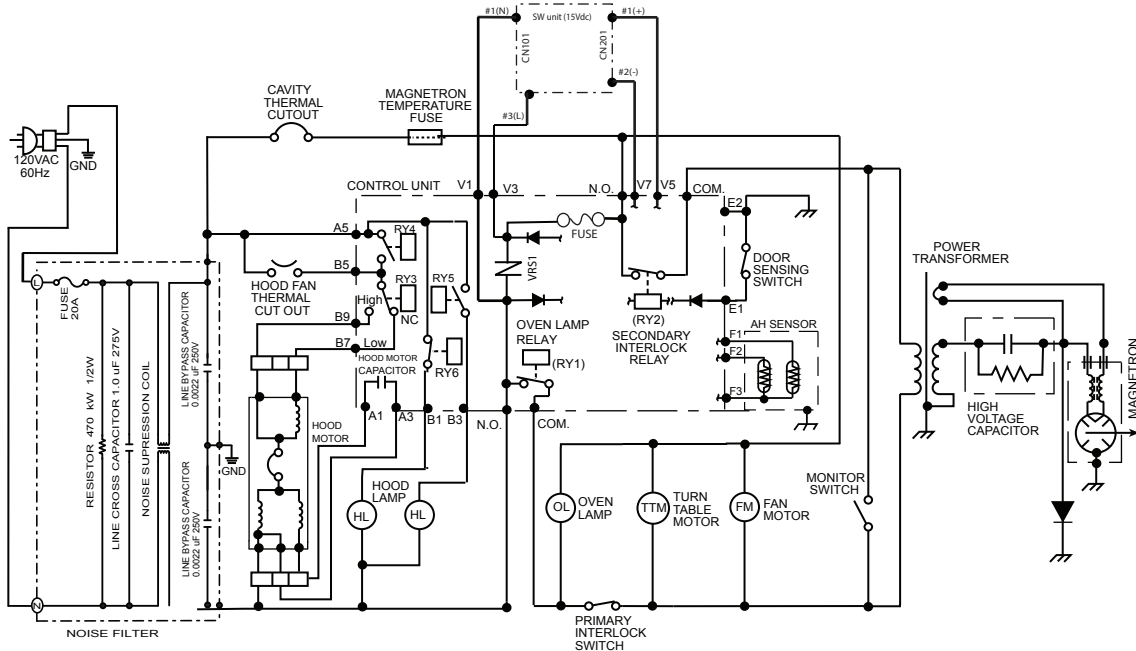
**SCHMATIC**  
 NOTE: CONDITION OF OVEN  
 1. DOOR CLOSED.  
 2. CLOCK APPEARS ON DISPLAY.



NOTES:  
 1. CIRCUITS SUBJECT TO CHANGE WITHOUT NOTICE.  
 2. TERMINAL WITH PROJECTION OR OPPOSITE BLUE MARK ON LAMP SOCKET MUST BE CONNECTED TO NEUTRAL WIRE.

**Oven Schematic-Off Condition**

**SCHMATIC**  
 NOTE: CONDITION OF OVEN  
 1. DOOR CLOSED.  
 2. COOKING TIME PROGRAMMED.  
 3. VARIABLE COOKING CONTROL "HIGH".  
 4. "START" BUTTON PRESSED.

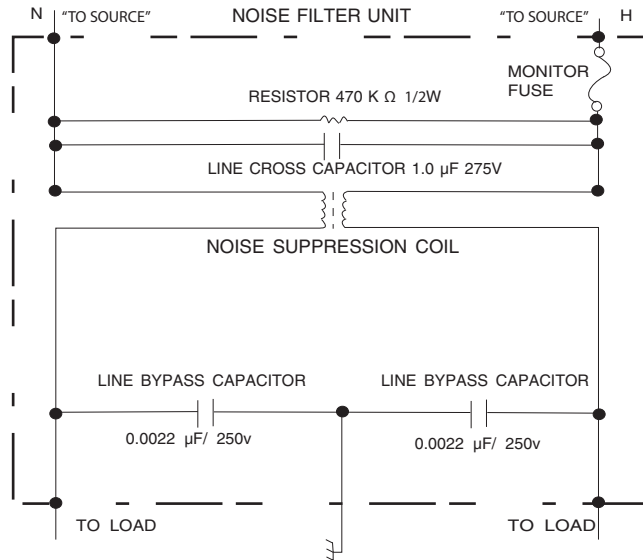


NOTES:  
 1. CIRCUITS SUBJECT TO CHANGE WITHOUT NOTICE.  
 2. TERMINAL WITH PROJECTION OR OPPOSITE BLUE MARK ON LAMP SOCKET MUST BE CONNECTED TO NEUTRAL WIRE.

**Oven Schematic-Cooking Condition**

## NOISE FILTER TEST

1. Disconnect the power supply cord, and then remove outer case.
2. Open the door and block it open.
3. Discharge high voltage capacitor.
4. Disconnect the leads to the primary of the power transformer.
5. Using an ohm-meter, check between the terminals as described in the following table:



MEASURING POINT	INDICATION OF OHM-METER
Between N and H	275 - 415Ω
Between terminal N and LOAD	Short Circuit
Between terminal H and LOAD	Short Circuit
Fuse	Short Circuit

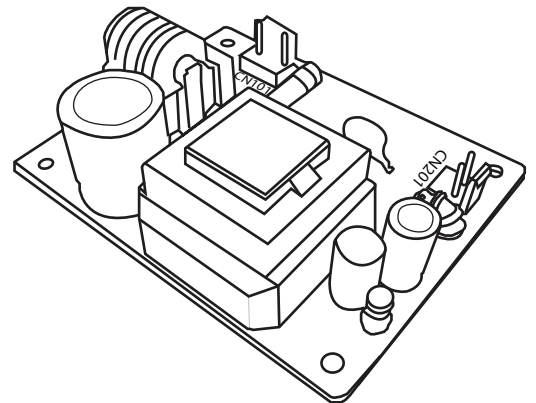
**If fuse is open, replace fuse**

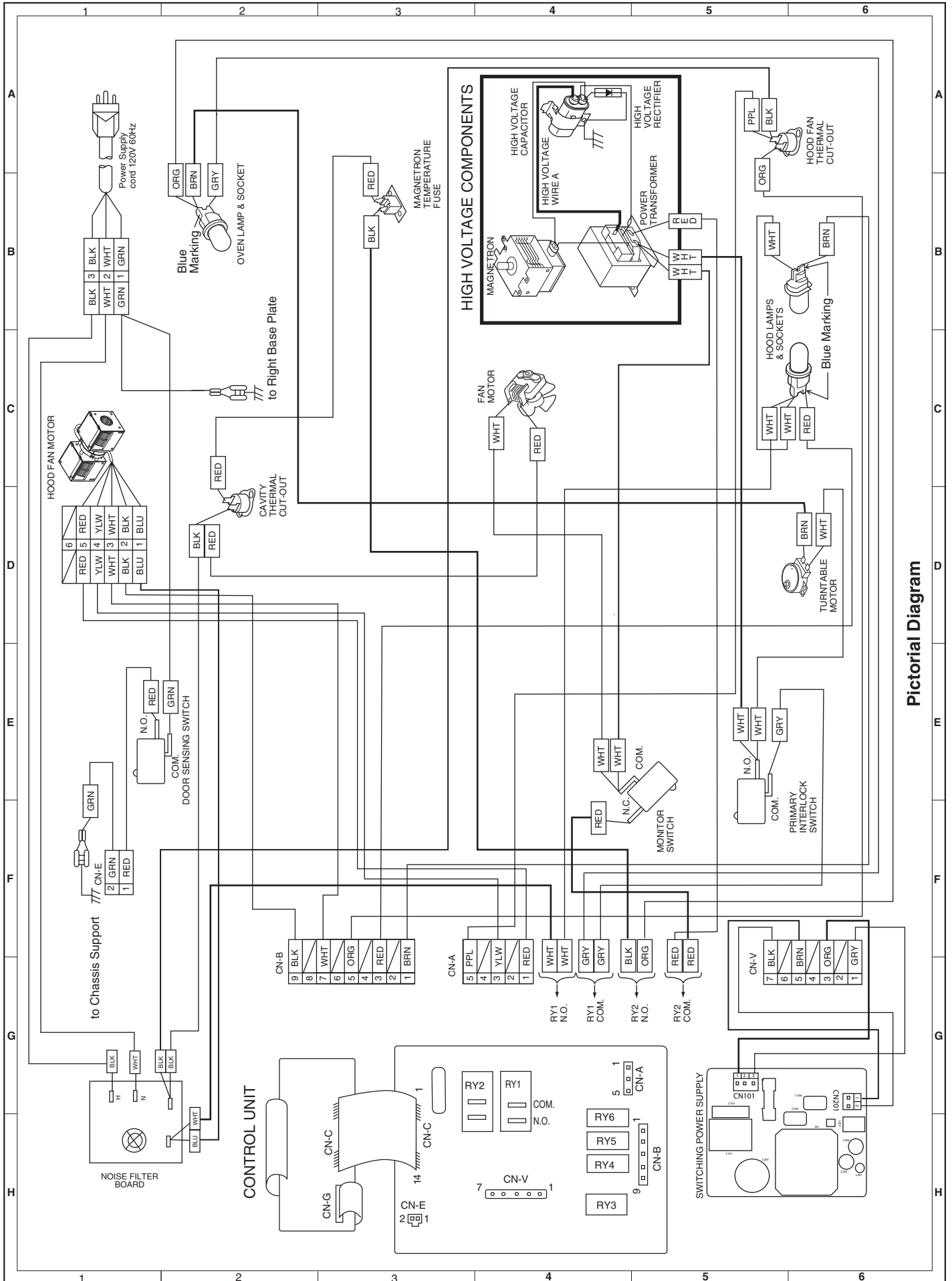
**If incorrect readings are obtained, replace the noise filter.**

6. Reconnect all leads removed from components during testing.
7. Re-install the outer case (cabinet).
8. Reconnect the power supply cord after the outer case is installed.
9. Run the oven and check all functions.

## SWITCHING POWER SUPPLY

1. Check AC power into CN101,  
if none check Main Harness.
2. Check DC power across CN201 (DC15V),  
if none replace **Switching Power Supply Unit**
3. Check for DC getting from **Switching Power Supply Unit**  
to PSU/ CPU, if none check Main Harness.





Pictorial Diagram

## PARTS LIST

**Note: The parts marked "Δ" may cause undue microwave exposure.  
The parts marked "\*" are used in voltage more than 250V.**

REF. NO.	PART NO.	DESCRIPTION	Q'TY	CODE
<b>ELECTRIC PARTS</b>				
* 1- 1	FH-DZB033MRY0	High voltage rectifier assembly	1	AN
1- 2	RC-QZA350WRZZ	High voltage capacitor	1	AT
1- 3	QFS-TA013WRE0	Temperature fuse 150½C (Magnetron)	1	AG
1- 4	RMOTDA252WRZZ	Turntable motor	1	AN
1- 5	RTHM-A180WRZZ	Thermal cut-out 145½C (Cavity)	1	AF
1- 6	RTHM-A181WRZZ	Thermal cut-out N.O. 60½C (Hood Fan)	1	AF
* 1- 7	RTRN-B096MRE0	Power transformer	1	BL
Δ 1- 8	RV-MZA293WRE0	Magnetron	1	BH
1- 9	FPWBFA512WRKZ	Noise filter	1	AN
1-10	QSW-MA168WRZZ	Primary interlock and door sensing switches	2	AF
1-11	QSW-MA169WRZZ	Monitor switch	1	AD
1-12	FACCDB011MRE0	Power supply cord	1	AV
1-13	QSOCLA021WRE0	Oven lamp socket	3	AG
1-14	FMOTEA584WRKZ	Hood fan motor	1	BK
1-15	RMOTEB031MRE0	Fan motor	1	AT
1-16	RLMPTA086WRZZ	Oven lamp	3	AL
1-17	FDTCTA225WRKZ	AH sensor	1	AW
1-18	DPWB-B451DRKZ	Switching power supply	1	AZ
1-19	QFS-BA009WRE0	20A fuse	1	AF

### CABINET PARTS

2- 1	LSTY-A121WRWZ	Rear stay	1	AN
2- 2	FDIF-B031MRK0	Hood exhaust louver	1	BF
2- 3	GDAI-A461WRWZ	Base plate R	1	AQ
2- 4	FDECAB138MRK0	Front panel L	1	AX
2- 5	GCABUB185WRPZ	Outer case cabinet	1	BG
2- 6	TMAPCA837WRRZ	Schematic diagram	1	AD
2- 7	FANGKB009MRY0	Hood lamp glass assembly	1	AP
2-7-1	LANGQB016MRP0	Hood lamp glass angle	1	AM
2-7-2	PGLSPB004MRE0	Hood lamp glass	1	AQ
2- 8	PCOVPA552WRTZ	Base cover	1	AZ

### CONTROL PANEL PARTS

3- 1	CPNLCE375WRKZ	T/C sub assy	1	BQ
3- 2	FPNLCA420MRK0A	Control panel sub, assembly	1	BE
3- 2-1	PSHEPB136MRR0	Key sheet	1	AN
3- 2-2	FDECAB139MRK0	Open button	1	AQ
3- 2-3	MSPRCA045WRE0	Button spring	1	AF
3- 2-4	LANGQA817WRWZ	Key fixing frame	1	AM
3- 2-5	QSW-KB057MRE0	FPC	1	AP
3- 3	XEPS730P08XS0	Screw	5	AB
3- 4	CPWBFA916WRKZ	CPU unit	1	BK
3- 5	PSHEPB101MRE0	Select button rubber	1	AF

### OVEN PARTS

4- 1	LSTPPB038MRF0	Door stopper	1	AF
4- 2	FROLPA097WRKZ	Turntable support assembly	1	AN
4- 3	NTNT-A108WREZ	Turntable tray	1	AW
4- 4	LBNDKA186WRPZ	Capacitor holder	1	AF
4- 5	PDUC-B155WRFZ	Magnetron duct	1	AK
4- 6	MLEVPA297WRFZ	Open lever	1	AG
4- 7	*****	Oven cavity (Not replaceable part)	1	
4- 8	PPACGA084WRF0	Turntable motor packing	1	AE
4- 9	PHOK-A182WRFZ	Latch hook	1	AG
4-10	LANGTA477WRWZ	Unit mounting plate assembly	1	AT
4-11	NFANJA060WRFZ	Fan blade	1	AH
4-12	LBSHCA014WRE0	Cord bushing	1	AG
4-13	PDUC-B173WRFZ	Orifice	2	AK
4-14	PDUC-B157WRWZ	Hood intake duct R	1	AN
4-15	PCOVPA554WRPZ	Waveguide cover	1	AF
4-16	PCUSUA661WRPZ	Transformer cushion	2	AC
4-17	LANGTA479WRPZ	Chassis support	2	AK
4-18	PDUC-B158WRFZ	Hood duct R	1	AQ
4-19	PDUC-B156WRFZ	Hood duct L	1	AR

REF. NO.	PART NO.	DESCRIPTION	Q'TY	CODE
4-20	PDUC-B159WRWZ	Fan duct	1	AM
4-21	PCUSUA665WRPZ	Cushion	1	AG
4-22	PCUSUA672WRPZ	Cushion	1	AF
4-23	LHLDPB004MRF0	PWB holder	1	AC

**DOOR PARTS**

5	CDORFB317MRK0A	Door assembly	1	BQ
5-1	LSTPPB023MRF0	Latch head	1	AF
5-2	MSPRTA046WRE0	Latch spring	1	AD
5-3	GCOVHB044MRF0	Choke cover	1	AX
5-4	XCPS740P08000	Screw : 4mm x 8mm	2	AC

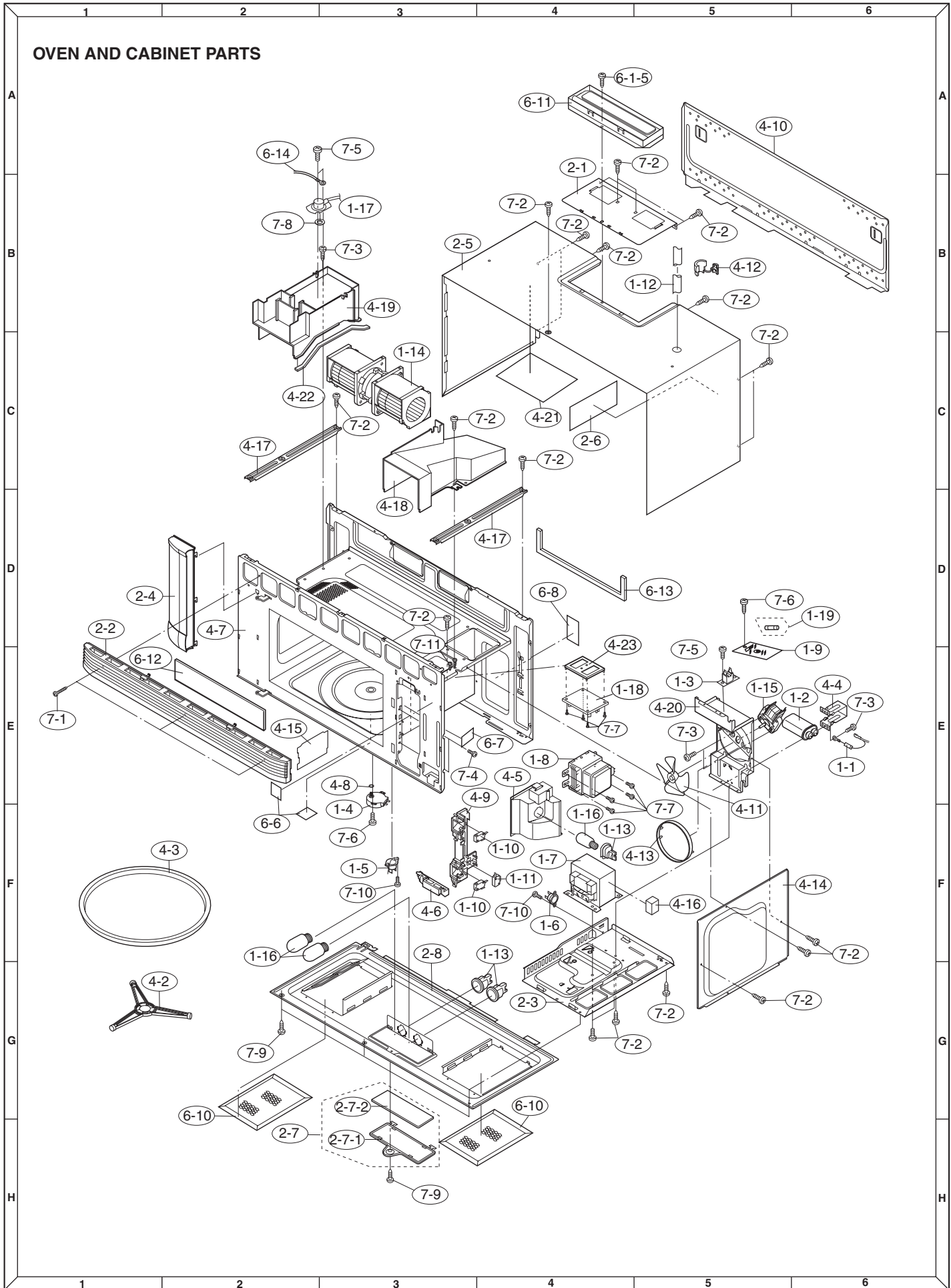
**MISCELLANEOUS**

6- 1	CFZK-B657WRKZ	Installation material assembly	1	AQ
6-1-1	LX-BZ0195WRE0	Toggle screw	4	AH
6-1-2	LX-BZA215WREZ	Screw :	2	AF
6-1-3	XOTS740P12000	Screw : 4mm x 12mm	1	AB
6-1-4	XTSS750P35000	Screw : 5mm x 35mm	4	AD
6-1-5	XWHS750-16300	Washer	2	AG
6- 2	TINSEB391WRRZ	Operation manual	1	AG
6- 3	TINSKA036WRRZ	Top template	1	AG
6- 4	QW-QZB023MRE0	High voltage wire A	1	AF
6- 5	FW-VZC451WREZ	Main harness	1	AX
6- 6	TCAUAA302WRRZ	DHHS service caution label	2	AF
6- 7	TCAUAA292WRRZ	Monitor caution label	1	AF
6- 8	TCAUAA300WRRZ	Revised DHHS/GRD C/label	1	AF
6- 9	TINSKA037WRRZ	Wall template	1	AH
6-10	PFIL-B005MRE0	Grease filter	2	AM
6-11	FFTA-B007MRK0	Exhaust damper assembly	1	AN
6-12	PFIL-B006MRE0	Charcoal filter	1	AR
6-13	PCUSUA660WRPZ	Rear cushion (for horizontal venting only)	1	AE
6-14	QW-VZB011MRE0	Sensor ground wire	1	AF
6-15	LANG-A136WRPZ	Scale plate	2	AF

**SCREWS,NUTS AND WASHERS**

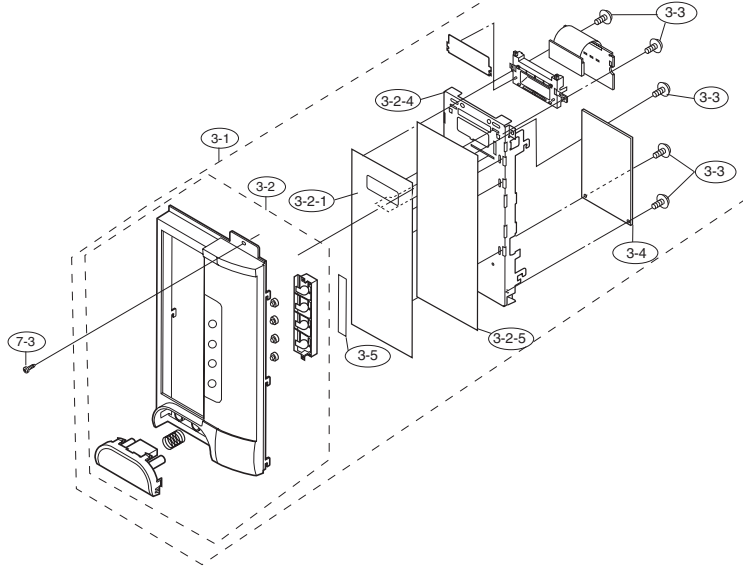
7- 1	LX-CZA109WREZ	Special screw	3	AF
7- 2	XOTS740P08000	Screw : 4mm x 12mm	20	AB
7- 3	XHPS730P08XS0	Screw	1	AB
7- 4	LX-CZ0052WREZ	Special screw	2	AA
7- 5	XEBS730P08000	Screw : 4mm x 8mm	2	AB
7- 6	XHPS740P08K00	Special screw	2	AC
7- 7	XHPS740P08000	Screw : 3mm x 8mm	4	AB
7- 8	LX-WZB003MRE0	Sensor washer	1	AF
7- 9	XOTS840P08000	Special screw	4	AB
7- 10	XHPS730P06000	Screw	2	AB
7- 11	XOTS740P08000	Screw : 4mm x 8mm	3	AB

# OVEN AND CABINET PARTS

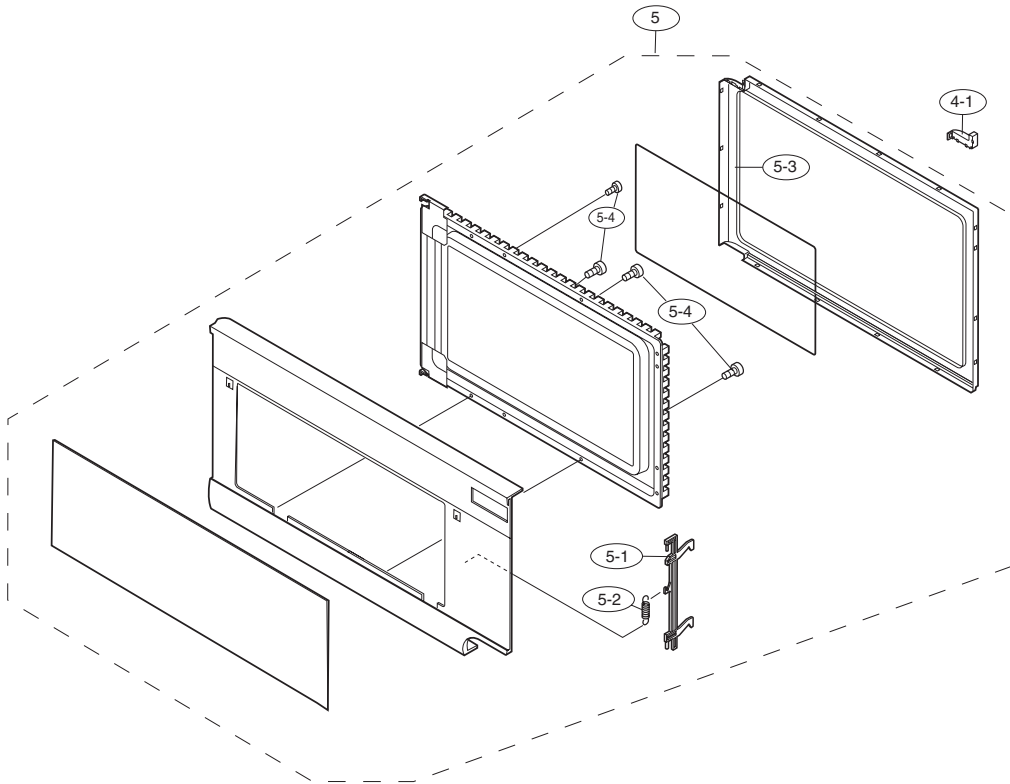




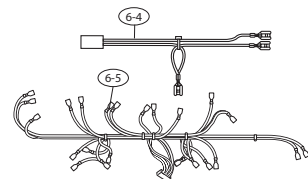
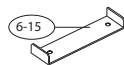
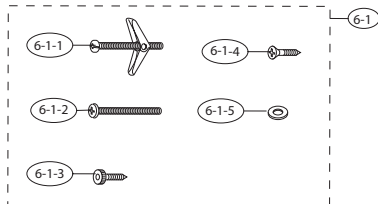
CONTROL PANEL PARTS



DOOR PARTS



MISCELLANEOUS



## HOW TO ORDER REPLACEMENT PARTS

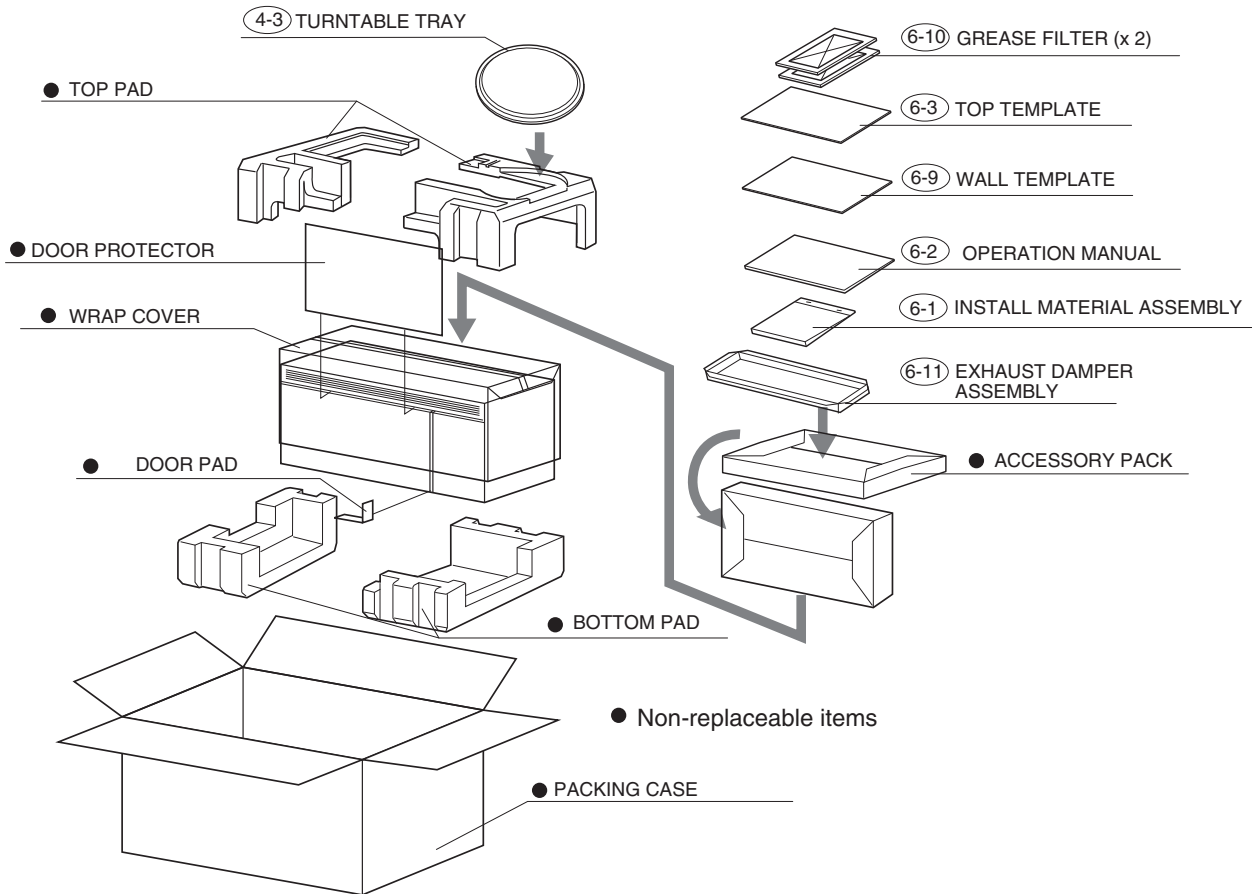
To have your order filled promptly and correctly, please furnish the following information.

1. MODEL NUMBER
2. REF. NO.
3. PART NO.
4. DESCRIPTION

Order Parts from the authorized SHARP parts Distributor for your area.

Defective parts requiring return should be returned as indicated in the Service Policy.

## PACKING AND ACCESSORIES



# NOTES

# SHARP

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