

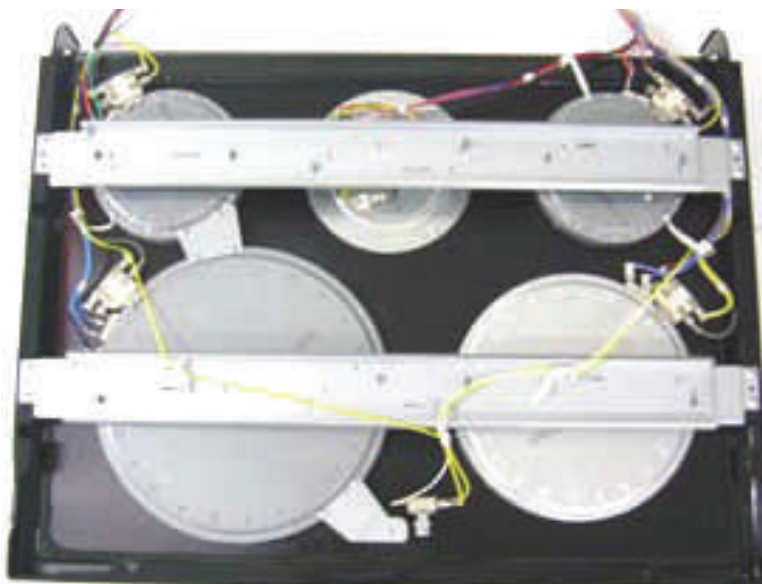
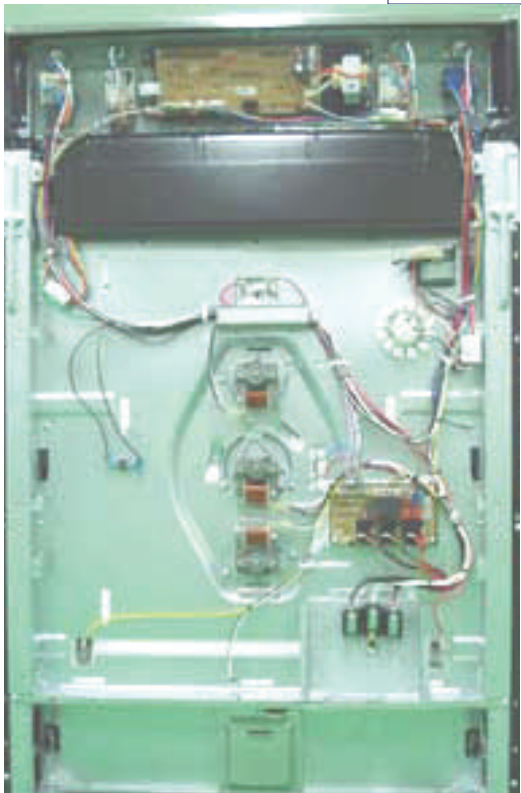


Fast Track Troubleshooting

Model:
FTQ387LWGX/XAA

IMPORTANT SAFETY NOTICE – “For Technicians Only” This service data sheet is intended for use by persons having electrical, electronic, and mechanical experience and knowledge at a level generally considered acceptable in the appliance repair trade. Any attempt to repair a major appliance may result in personal injury and property damage. The manufacturer or seller cannot be responsible, nor assume any liability for injury or damage of any kind arising from the use of this data sheet.

Publication # **tsFTQ387** Creation Date 01/19/2010



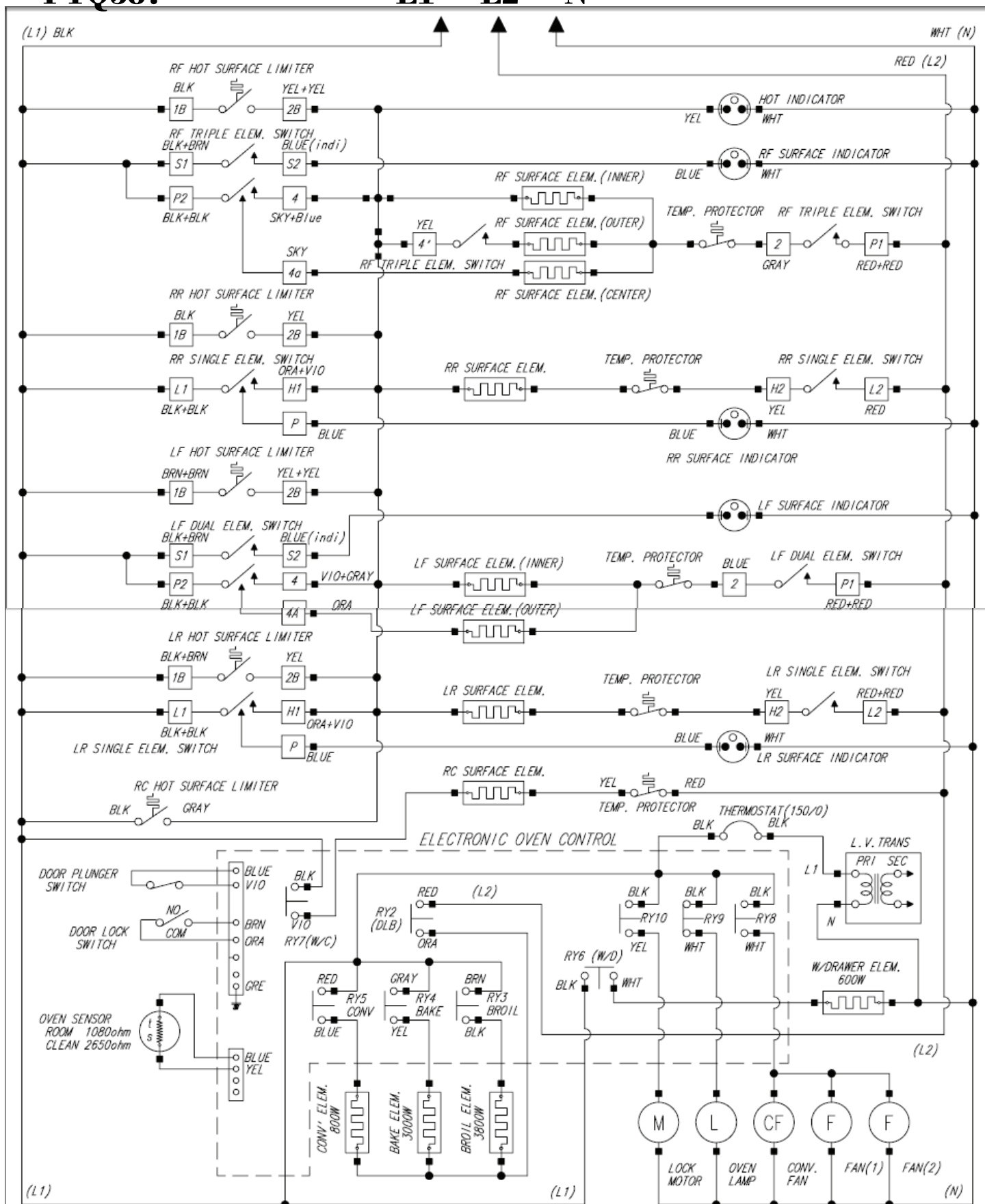
WARNING: It is critical to route wires and wire harness identical to the way they were, to prevent electromagnetic interference causing possible fault codes.

Electric Range Components

Burner Elements				Oven Elements			
Component	Voltage	Wattage	Ω @ Room Temp	Component	Voltage	Wattage	Ω @ Room Temp
LR	240vac	1200	45 Ω ~50 Ω	Broil	240vac	3800 W	13 ~ 16 Ω
RR	240vac	1200	45 Ω ~50 Ω	Bake	240vac	3000 W	26 ~ 30 Ω
LF Dual (387)	240vac	1400/3000	41 Ω /19 Ω	Convect	240vac	800 W	70 ~ 73 Ω
RF Triple	240vac	1100/2200/3000	53 Ω /26 Ω /19 Ω	Warm Dr	120vac	600 W	22 ~ 25 Ω
RC Warm	240vac	100	570 Ω ~580 Ω	Oven Temp Sensor Resistance Chart			
Components				Degree °F	Ω	Degree °F	Ω
Door Lock Mtr	120vac		1750 ~ 1850 Ω	0	932.12	104	1151.38
Conv Fan	120vac		20 ~ 30 Ω	14	961.86	113	1170.17
Sub Fan	120vac		85 ~ 100 Ω	23	980.95	122	1188.93
Low Voltage Transformer	120vac	(Wht)	75 ~ 80 Ω	32	1000	212	1374.93
	13.5vac	(Red)	1.8~2.2 Ω	41	1019.02	302	1558.01
	8vac	(Yel)	0.8~1.2 Ω	50	1038.02	392	1738.06
				59	1056.99	482	1915.39
				68	1075.92	572	2089.69
				77	1094.83	662	2261.07
				86	1113.71	752	2429.52
				95	1132.56	842	2595.05
						932	2757.65

FTQ387***

L1 L2 N

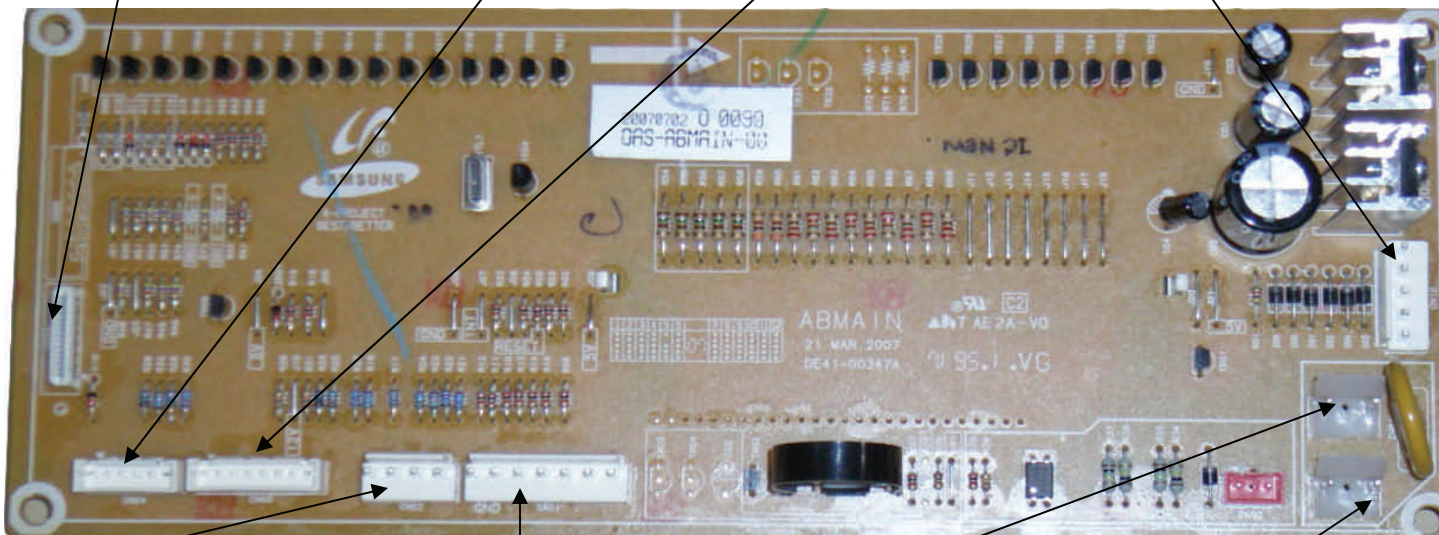


CN07 15 pin ribbon connector to Keypad

CN04 Connector to Sub PCB Ass'y
Blue Orange,
Blue Orange,
Blue Orange

CN05 Connector to Sub PCB Ass'y
Blk~Wht, Blk~Wht,
Blk~Wht, Blk~Wht

CN10 LV Transformer
Red~Red (13.5vac) 1.5~2.5Ω
Yellow~Yellow (8vac) 0.8~1.5Ω



CN02 Oven Sensor
Yellow, Blue

CN01
1 Gnd (Green)
4 Door Lock Com (Pnk)
5 Door Lock N/O (Brn)
6-7 Door Sw (Blu-Vio)

CN08 LV Transformer
Primary (120vac)
75~80Ω

CN09 120vac supply

CN01
Lock Motor (Yellow)
Oven Lamp (White)
Conv. Fan (White)
Door Switch
Warming Center

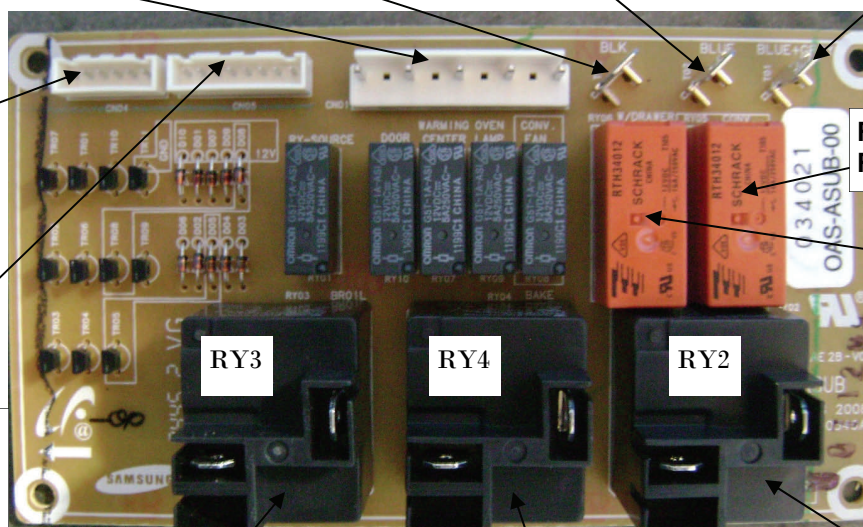
T03 Warming Drawer
Out (Black)

T02 Convection
Heater Out (Blue)

T01 L1 120vac Supply
for Warming Drawer &
Convection Heater
Relays (Blue + Gray)

CN04 Connector to Oven PCB Ass'y
Blue Orange,
Blue Orange,
Blue Orange

CN05 Connector to Oven PCB Ass'y
Blk~Wht,
Blk~Wht,
Blk~Wht,
Blk~Wht



RY5 Convection
Relay

RY6 Warmer
Relay

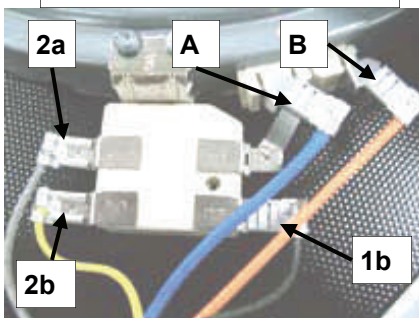
Broil Relay
Brown ~ Black

Bake Relay
Gray ~ Yellow

Double Line Break Relay
Red ~ Orange

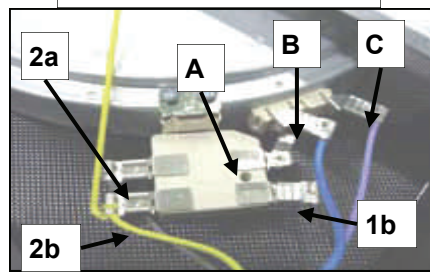
Electric Range Surface Burners and Infinite Switches Wiring, Resistance and Test Points

LF Burner



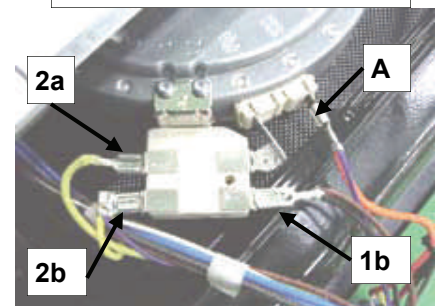
RF/LF radiant element	
Position	Color
A	Blue
B	Orange
1b	Black
2b	Yellow
2a	Gray
Position	Ohms
1b-2b	$\infty \Omega$
2a-"A"	45~55 Ω
2a-"B"	42~48 Ω

RF Burner

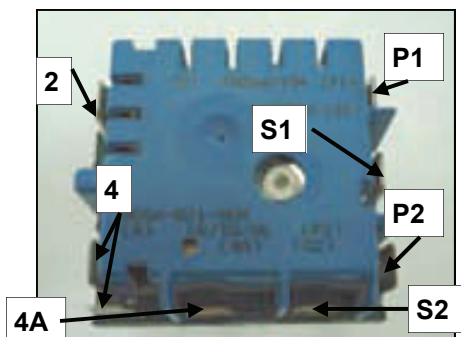


RF radiant element	
Position	Color
A	Blue
B	Sky
C	Violet
1b	Black
2b	Yellow+Yellow
2a	Gray
Position	Ohms
1b-2b	$\infty \Omega$
2a-"A"	48~55 Ω
2a-"B"	42~48 Ω
2a-"C"	70~75 Ω

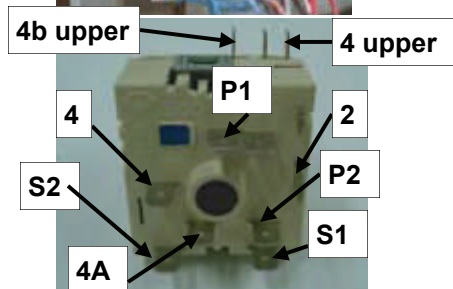
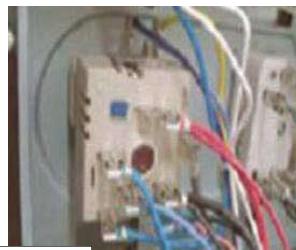
RR & LR Burner



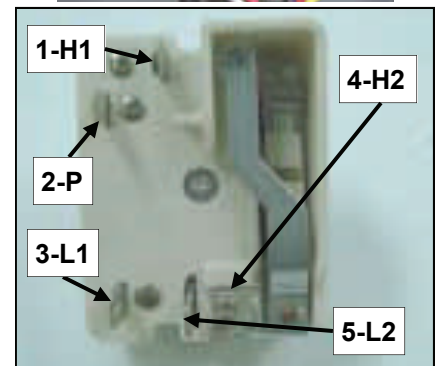
LR & RR radiant elements	
Position	Color
A (RR)	violet+violet
A (LR)	orange+violet
1b	black+brown
2b	yellow+violet
2a	yellow
Position	Ohms
1b-2b	∞
2a-"A"	45~50 Ω



RF Dual INF Switch	
Position	Color
P1	red+red
S1	black+brown
P2	black+black
S2	blue (Indicator lamp)
4A	violet
4	yellow & violet+gray
2	blue



RF INF Switch	
Position	Color
P1	red+red
2	gray
P2	black+black
S1	black+brown
4A	sky
S2	blue (Indicator lamp)
4	blue+sky
4 upper	yellow
4b upper	sky+violet



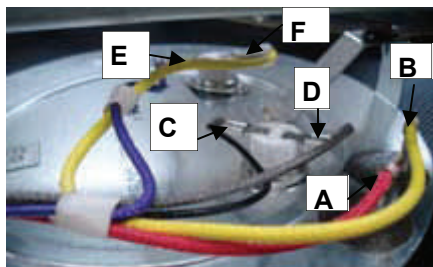
LR & RR INF Switch	
Position	Color
3-L1 (RR)	black+black
3-L1 (LR)	black+brown
5-L2	red+red
4-H2	yellow
2-P	blue
1-H1	orange+orange+violet

Samsung 'Electric Range' Diagnostic Code Quick Guide

Display Failure Codes	POWER LOSS CLEARS CODES 1)Press Clock AM/PM pad. 2) Press pad again, select AM. 3)Press # 1-2-3-4 pads. 4)Press Set/Start pad. 5)Press Custom Cook & # 0 pads simultaneously for 2 seconds. 6) error codes will display. 7) Press number 0 pad to review last 5 codes. 8) Press Clear/Off to exit.	
Failure Code	Cause	Solution
E27 E28	Oven sensor opened(over 2950Ω) Oven sensor shorted (Under 930Ω)	1. Disconnect power. Open the back cover. Disconnect sensor harness from control Measure sensor resistance :1080Ω at room temperature → If different value, replace oven sensor. 2. If there is not any problem with oven sensor, Please check whether there is a damaged terminal or wire on harness. 3. Check resistance of oven sensor connector on main PCB (Normal:2850Ω)
E-08 E-0A	Oven not heating error Oven over heating error	1. Disconnect power. Open the back cover. Disconnect sensor harness from control. Measure sensor resistance :1080Ω at the room temperature → If different value, replace oven sensor. 2. Check the broil, bake and convection heater. Check the resistance of each. 3. Check whether DLB of sub PCB, Broil, Bake and Convection heater relay are being activated 4. Check wiring harnesses between main PCB on sub PCB. 5. Check the resistance of oven sensor connector on main PCB. (Normal : 2850Ω)
SE	Shorted key	1. Check if cable of keypad has been inserted into connector of main PCB. 2. Check for short between main PCB and connector or keypad and cable. 3. If there is not a problem with connector on main PCB and cable of keypad, replace the main PCB.
E-OE	Door locking error	1. Disconnect power. Open the back cover. Check wiring harness connections between door lock switch and motor. 2. Check resistance of door lock motor ,1750~1850Ω at the room temperature. 3. With operating door lockout, measure voltage at door lock motor. (Normal Voltage : AC 120V) 4. Check whether door locking switch is operating properly.
LE	Low Voltage Error	It occurs when the DC 12V is dropped under 9V. It may occurs due to defects of PCB or wiring.



Door Lock Error: Press and hold Cook Time & Delay Start for 3 seconds to test motor operation.



RC warming element	
Position	Ohms
A-B	560~600Ω
C-D	∞Ω
E-F	0Ω

RC warming element	
Position	Color
A	red or yellow
B	yellow or red
C	black or gray
D	gray or black
E	yellow or violet
F	violet or yellow



Hot indicator Lamp	
Position	Color
A	yellow+yellow
B	white



Low Voltage Transformer

120vac	(Wht)	75 ~ 80Ω
13.5vac	(Red)	1.8~2.2Ω
8vac	(Yel)	0.8~1.2Ω