



## Fast Track Troubleshooting

### Model:

**FE-R300SB/XAA**  
**FE-R300SW/XAA**  
**FE-R300SX/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.

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

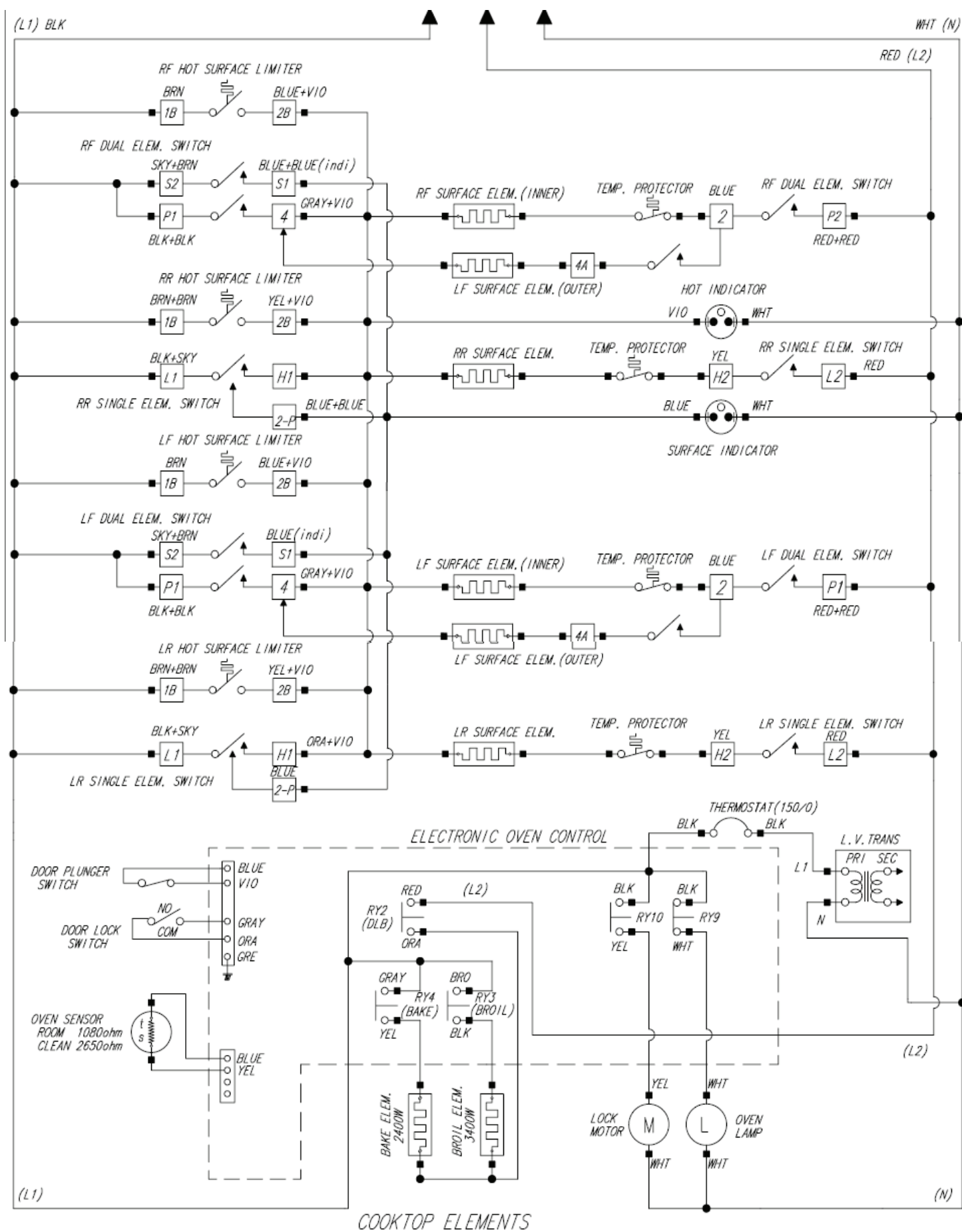
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### Samsung 'Electric Range' Diagnostic Code Quick Guide

| 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. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <u>Failure Code</u>   | <u>Cause</u>                                                                                                                                                                                                                                                                                       | <u>Solution</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| E27<br>E28            | Oven sensor opened(over 2950Ω)<br>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.<br>2. If there is not any problem with oven sensor, Please check whether there is a damaged terminal or wire on harness.<br>3. Check resistance of oven sensor connector on main PCB (Normal:2850Ω)                                                                                                                               |
| E-08<br>E-0A          | Oven not heating error<br>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.<br>2. Check the broil, bake and convection heater. Check the resistance of each.<br>3. Check whether DLB of sub PCB, Broil, Bake and Convection heater relay are being activated<br>4. Check wiring harnesses between main PCB on sub PCB.<br>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.<br>2. Check for short between main PCB and connector or keypad and cable.<br>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.<br>2. Check resistance of door lock motor ,1750~1850Ω at the room temperature.<br>3. With operating door lockout, measure voltage at door lock motor. (Normal Voltage : AC 120V)<br>4. Check whether door locking switch is operating properly.                                                                                                                                                     |
| LE                    | Low Voltage Error                                                                                                                                                                                                                                                                                  | It occurs when the DC 12V is dropped under 9V.<br>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.

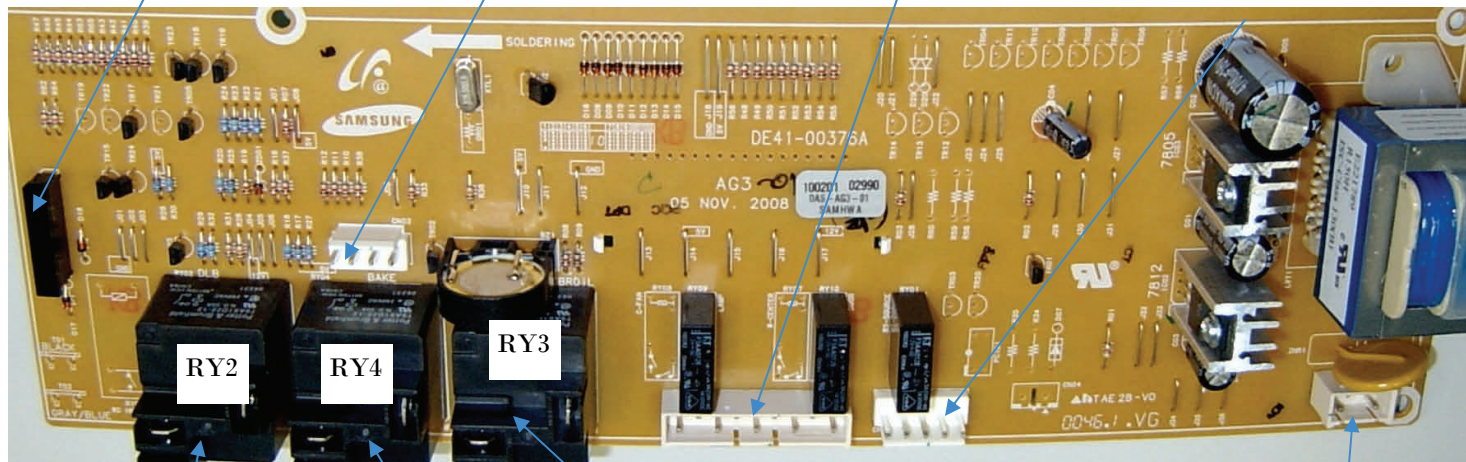


**CN05 15 pin ribbon connector to Keypad**

**CN03 Oven Sensor**  
2-3 Oven Sensor (Yel-Blu)

**CN06**  
3 Oven Lamp Relay  
7 Lock Motor

**CN02**  
1 Gnd (Green)  
2 Door Lock Com (Org)  
3 Door Lock N/O (Brn)  
4-5 Door Sw (Vio-Blu)



**Double Line Break Relay**  
Red ~ Orange

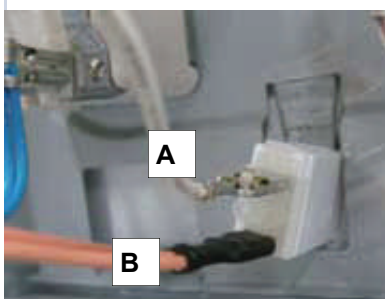
**Bake Relay**  
Gray ~ Yellow

**Broil Relay**  
Brown ~ Black

**CN01 120vac supply**  
1 N  
3 L1

### Electric Range Components

| Burner Elements |         |             |                                       | Oven Elements                     |          |           |                      |
|-----------------|---------|-------------|---------------------------------------|-----------------------------------|----------|-----------|----------------------|
| Component       | Voltage | Wattage     | $\Omega$ @ Room Temp                  | Component                         | Voltage  | Wattage   | $\Omega$ @ Room Temp |
| LR              | 240vac  | 1200        | 45 $\Omega$ ~50 $\Omega$              | Broil                             | 240vac   | 3400 W    | 16 ~ 18 $\Omega$     |
| RR              | 240vac  | 1200        | 45 $\Omega$ ~50 $\Omega$              | Bake                              | 240vac   | 2400 W    | 23 ~ 25 $\Omega$     |
| RF Dual         | 240vac  | 1,400/3,000 | 41 $\Omega$ /20 $\Omega$              | Oven Temp Sensor Resistance Chart |          |           |                      |
| LF Dual         | 240vac  | 1200/2500   | 45 $\Omega$ ~55 $\Omega$ /23 $\Omega$ | Degree °F                         | $\Omega$ | Degree °F | $\Omega$             |
| Components      |         |             |                                       | 0                                 | 932.12   | 104       | 1151.38              |
| Door Lock Mtr   | 120vac  |             | 1750 ~ 1850 $\Omega$                  | 14                                | 961.86   | 113       | 1170.17              |
|                 |         |             |                                       | 23                                | 980.95   | 122       | 1188.93              |
|                 |         |             |                                       | 32                                | 1000     | 212       | 1374.93              |
|                 |         |             |                                       | 41                                | 1019.02  | 302       | 1558.01              |
|                 |         |             |                                       | 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              |

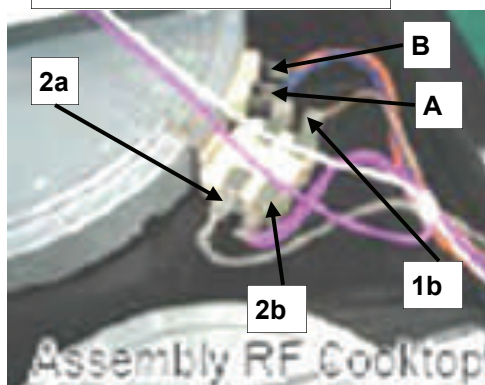


| Hot indicator Lamp |               |
|--------------------|---------------|
| Position           | Color         |
| A                  | White         |
| B                  | Orange-Orange |

# Electric Range Surface Burners and Infinite Switches

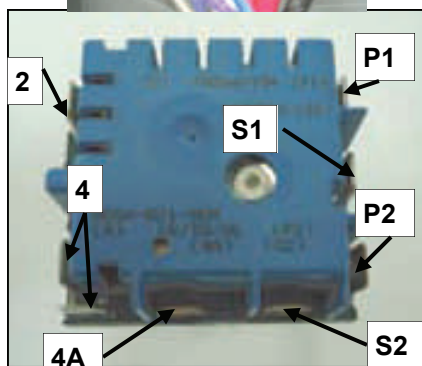
## Wiring, Resistance and Test Points

RF & LF Burner



RF & LF radiant element

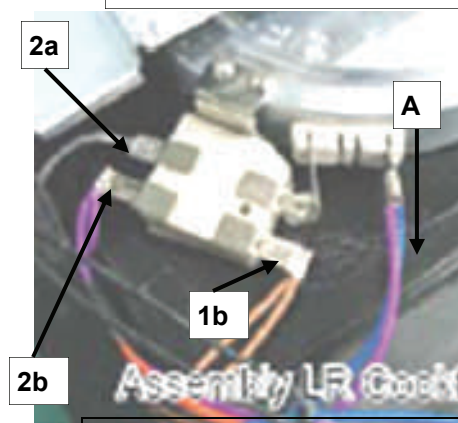
| Position | Color           |
|----------|-----------------|
| A        | Blue            |
| B        | Orange          |
| 1b       | Brown           |
| 2b       | Violet + Violet |
| 2a       | Gray            |
|          |                 |
| Position | Ohms            |
| 1b-2b    | $\infty\Omega$  |
| 2a-"A"   | 45~55 $\Omega$  |
| 2a-"B"   | 42~48 $\Omega$  |



RF & LF INF Switch

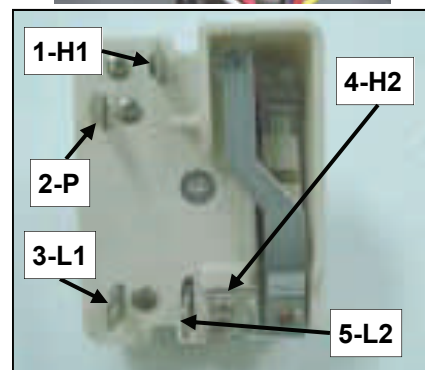
| Position | Color       |
|----------|-------------|
| P1       | red+red     |
| S1       | sky+brown   |
| P2       | black+black |
| S2       | blue+blue   |
| 4A       | yellow      |
| 4        | violet+gray |
| 2        | blue        |

RR & LR Burner



LR & RR radiant element

| Position | Color          |
|----------|----------------|
| A        | violet+blue    |
| 1b       | brown+brown    |
| 2b       | violet+violet  |
| 2a       | gray           |
| Position | Ohms           |
| 1b-2b    | $\infty\Omega$ |
| 2a-"A"   | 45~50 $\Omega$ |



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 |