



Fast Track Troubleshooting

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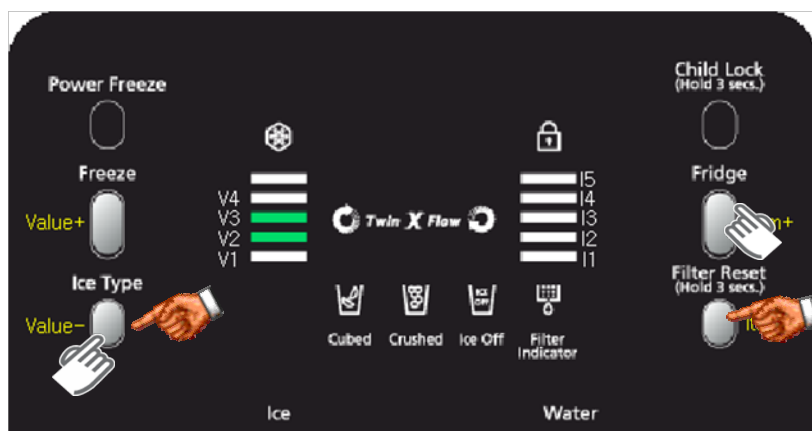
Models Covered:
RS2530**/XAA
SxS Refrigeration

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.

Self Diagnosis: Press both buttons (Ice Type -Filter Reset) *simultaneously* (No sound when both buttons are pressed at the same time) 'til the display quits blinking and beeps, 8-12 seconds, then release and read Fault Codes.

This will also cancel the Fault Mode created by self-diagnosis at power up.

Forced Mode: Press both buttons (Ice Type – Fridge) *simultaneously* (No sound when both buttons are pressed at the same time) 'til it beeps and goes blank, 8-12 seconds



Wait 5 seconds between button pushes

Forced Compressor

Press Freeze button one time at the Test Mode to Force Compressor Run, measure fan and compressor voltages at main PCB

Forced Defrost

Press Freeze button a second time to Force Defrost for Freezer, measure defrost voltage at main PCB

Cancellation, unplug unit

Sales Mode, No Compressor Operation

Press Power Freeze & Freezer temp buttons simultaneously for 3 sec (you will hear a “Ding Dong”) to remove or put into Sales Mode. When in the Sales Mode the Display will show “OF” “OF”

Removing power will not cancel this mode.

Temperature/Resistance/Voltage Chart for Refrigerators Sensors

Temp.	(Ω)	Volts	Temp.	(Ω)	Volts	Temp.	(Ω)	Volts	Temp.	(Ω)	Volts
-29.2°F	64227	4.326	1.4°F	28021	3.685	32.0°F	13290	2.853	62.6°F	6771	2.019
-27.4°F	61012	4.296	3.2°F	26760	3.64	33.8°F	12749	2.802	64.4°F	6521	1.974
-25.6°F	57977	4.264	5.0°F	25562	3.594	35.6 °F	12233	2.751	66.2°F	6281	1.929
-23.8°F	55112	4.232	6.8°F	24425	3.548	37.4 °F	11741	2.7	68.0°F	6052	1.885
-22.0°F	52406	4.199	8.6°F	23345	3.501	39.2 °F	11271	2.649	69.8°F	5832	1.842
-20.2°F	49848	4.165	10.4°F	22320	3.453	41.0°F	10823	2.599	71.6°F	5621	1.799
-18.4°F	47431	4.129	12.2°F	21345	3.405	42.8°F	10395	2.548	75.2°F	5225	1.716
-16.6°F	45146	4.093	14.0°F	20418	3.356	44.6°F	9986	2.498	77.0°F	5000	1.675
-14.8°F	42984	4.056	15.8°F	19537	3.307	46.4°F	9596	2.449	78.8°F	4861	1.636
-13.0°F	40938	4.018	17.6°F	18698	3.258	48.2°F	9223	2.399	80.6°F	4690	1.596
-11.2°F	39002	3.98	19.4°F	17901	3.208	50.0°F	8867	2.35	86.0°F	4218	1.483
-9.4°F	37169	3.94	21.2°F	17142	3.158	51.8°F	8526	2.301	87.8°F	4072	1.447
-7.6°F	35433	3.899	23.0°F	16419	3.107	53.6°F	8200	2.253	89.6°F	3933	1.412
-5.8°F	33788	3.858	24.8°F	15731	3.057	55.4°F	7888	2.205	91.4°F	3799	1.377
-4.0°F	32230	3.816	26.6°F	15076	3.006	57.2°F	7590	2.158	95.0°F	3547	1.309
-2.2°F	30752	3.773	28.4°F	14452	2.955	59.0°F	7305	2.111	96.8°F	3428	1.277
-0.4°F	29350	3.729	30.2°F	13857	2.904	60.8°F	7032	2.064	100.4°F	3204	1.213

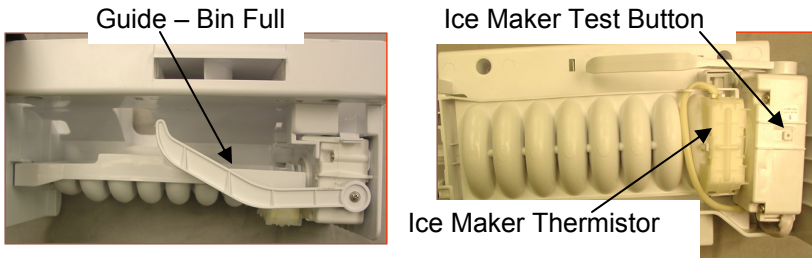
FLEX TRAY Ice Makers

When the initial power is applied, the ice tray will stand by for 2 hours. After the 2-hour standby time, the Ice Maker Sensor will check the temperature, when it is lower than 1.5°F for more than 5 minutes, it will do a harvest, with or without ice in the tray, then fill with water. 58 minutes after water is supplied to the Ice Tray, the Ice Maker Sensor temperature will be checked. When the Ice Maker Sensor maintains lower than 1.5°F for 5 minutes, it completes the harvest (if the ice bin is not sensed as full).

Thermistor senses temperature to determine water fill on newer units

Filling the tray

After the water fill is completed, the ice maker sensor will evaluate the water volume one and a half minutes later. When it detects no or low water level, it will add more water. First supply time will be 1.5 sec, next one will be 1 sec and the last will be 2 sec.



Component	Resistance	Wattage	Voltage
Freezer Defrost Heater	46Ω	310	120vac
Dispenser Heater	3600Ω	4	120vac
Fill Tube Heater	2880Ω	5	120vac
Sensors	2.5kΩ-89kΩ	N/A	1~4.5vdc
Fans	N/A	N/A	120vac

Component
Value
Chart

Shattered Ice – Flex Tray

When all ice shatters, it's because of a bad tray or ice cube temp that is too cold (lower than -5 degrees). In some areas, there are water issues that can also cause shattered cubes. The temp in the freezer should not have any effect on this issue, as long as it's below 1.5 degrees F, as a properly installed sensor will not read the freezer temp, only the water/ice temp.

Check the Ice tray for defects in the plastic. Ice that is too cold will shatter during harvest. This can be from the (1) sensor not reading the correct temp (2) or the sensor not mounted correctly (3). By programming the icemaker offset value to a lower number (4), the board not understanding the reading. To check the sensor, you must check the tray temp (not air temp) and compare it to the sensor reading. The sensor should read 3.7 volts at the main board connector when the cube temperature is 1 degree. After the fill, the sensor will read water temp 1.5 to 2.2 volts. To clear offsets, put unit into Diagnostics mode.

Please note, some shattering is normal for a flex tray icemaker.

Refrigerant Charge
R134a 6.17 oz.

Samsung 'Refrigerator' Diagnostic Code Quick Guide

Samsung Single Evaporator 'Refrigerator' Diagnostic Code Quick Guide

No	Error Items	Display LED	TROUBLE
1	Fridge Sensor	Fridge "M id"	Fridge Room Sensor Error- This can be an wire cut, short-circuit, contact failure, or missing sensor. This can also be caused by a temperature reading > 149° or < -58 ° F.
2	Peripheral Temp Sensor	Fridge "M in"	Ambient Temp. Sensor Error- This can be a wire cut, short-circuit, contact failure, or missing sensor. This can also be caused by a temperature reading > 149° or < -58 ° F.
3	Freezer Sensor	Freezer "M ax"	Freezer Room Sensor Error- This can be an wire cut, short-circuit, contact failure, or missing sensor. This can also be caused by a temperature reading > 149° or < -58 ° F.
4	Freezer Defrost Sensor	Freezer "M id"	Freezer Room Defrost Sensor Error- This can be a wire cut, short-circuit, contact failure, or missing sensor. This can also be caused by a temperature reading > 149° or < -58 ° F.
5	Freezer Defrost Error	Freezer "M in"	Freezer Room defrosting heater- wire cut, short-circuit, contact failure, missing sensor housing, or defective temperature fuse/bi-metal. Defrost on for over 90 minutes
6	I/M Function Error	No Ice	This error indicates the Ice tray has not returned to level after an ice harvest. The error is displayed after three failed attempts.
7	I/M Sensor Error	Cubed Ice	Ice Maker Sensor Error- This can be a wire cut, short-circuit, contact failure, or missing sensor. This can also be caused by a temperature reading > 149° or < -58 ° F.

RS2530

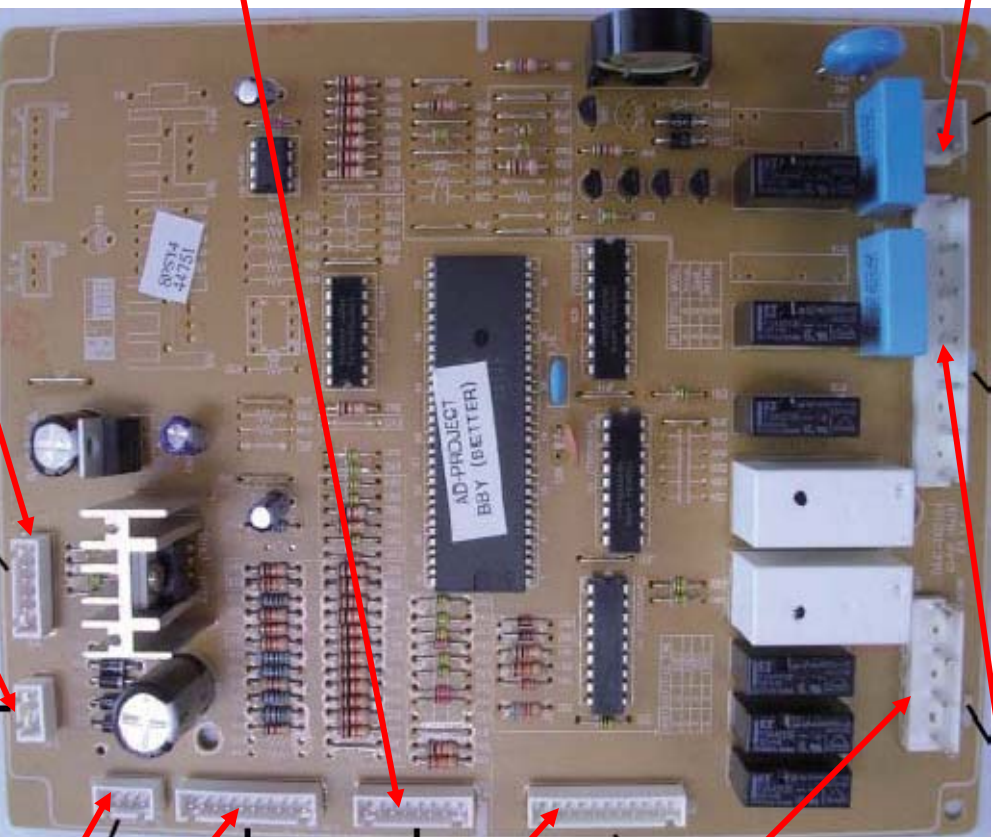
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**CN72 120vac (panel display)
Dispenser Heater 1-3(Red-Blu)**

BLU-BLUE
BRN-BROWN
RED-RED
GRY-GRAY
ORG-ORANGE
PNK-PINK
E-EARTH
PRP-PURPLE
S/BLUE-SKY BLUE
WHT-WHITE
YEL-YELLOW
BLK-BLACK
W/BLK-WHITE/BLACK
W/RED-WHITE/RED
W/BLU-WHITE/BLUE
W/YEL-WHITE/YELLOW

CN90 Ice Maker
1-2 I/M Motor (Red-Blk) 12vdc
3-4 I/M Sensor (Wht-Wht) 2.3~3.3vdc
5-8 Test Sw (Gry-S/Blu)
6-8 Horizontal Sw (Blu-S/Blu)
7-8 Fill Sw (Prp-S/Blu)

CN75
1-2 Damper Heater (Blk-Blk) 12vdc



CN71 120vac
13-3 Comp (S/Blu-Red)
11-3 Heater (Brn-Red)
1-3 Evap Fan (Org-Red)
7-3 Cond Fan (W/Blu-Red)

CN70 120vac
1-(CN71-3) Auger Mtr (Pnk-Red)
3-(CN71-3)Cube Solenoid (Yel-Red)
5-(CN71-3) Ice Valve (Prp-Red)
7-(CN71-3) Water Valve (W/Blk-Red)

CN50 Panel Display

CN30
3-4Frz Dr Sw (W/Red-Blk) 0 or 5 vdc
7-8 Ref Dr Sw (W/Blu-Blk) 0 or 5 vdc
5-4 F-Sensor (Yel-Blk) 3.5~4.2vdc
6-4 F-Def Sensor (Blu-Blk) 2.3~4.2vdc
9-8 R-Sensor (Prp-Blk) 2.4~2.8vdc

CN31 Panel Display
1-4 Ambient Sensor (Wht/Blk-W/Yel) 1.2~2 vdc
2-4 Ice Sw (W/Red-W/Yel)
3-4 Water Sw (W/Blu-W/Yel)

CN10 Transformer
12-16VAC Pins 1-3 (Blu-Blu)

