Heater Control

Front Seat Heaters

The seat heater control unit sets the seat heater to High/Mid/Low or OFF based on the seat heater switch signal sent from the climate control unit via the B-CAN. The seat heater control unit monitors the thermistor resistance, the voltage/current/temperature to the heater, and the presence of communication with the climate control unit.

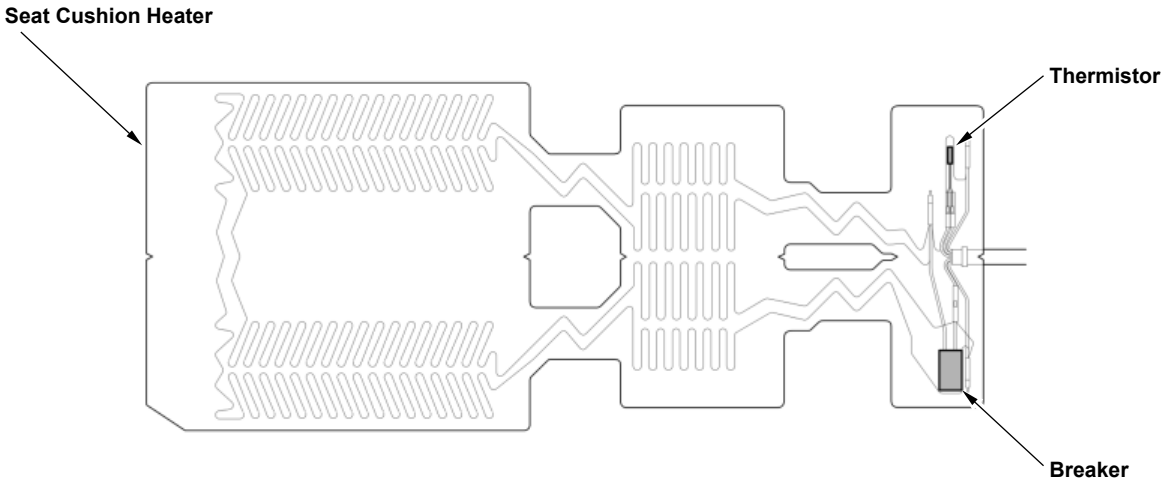
Automatic Operation

Based on the outside air temperature, A/C target temperature and other factors, the climate control unit calculates the optimal front seat heater setting. The climate control unit sends this setting request to the front seat heater control unit via B-CAN. When operating in auto mode or during remote engine start, the front seat heater control unit will operate per the B-CAN setting request from the climate control unit.

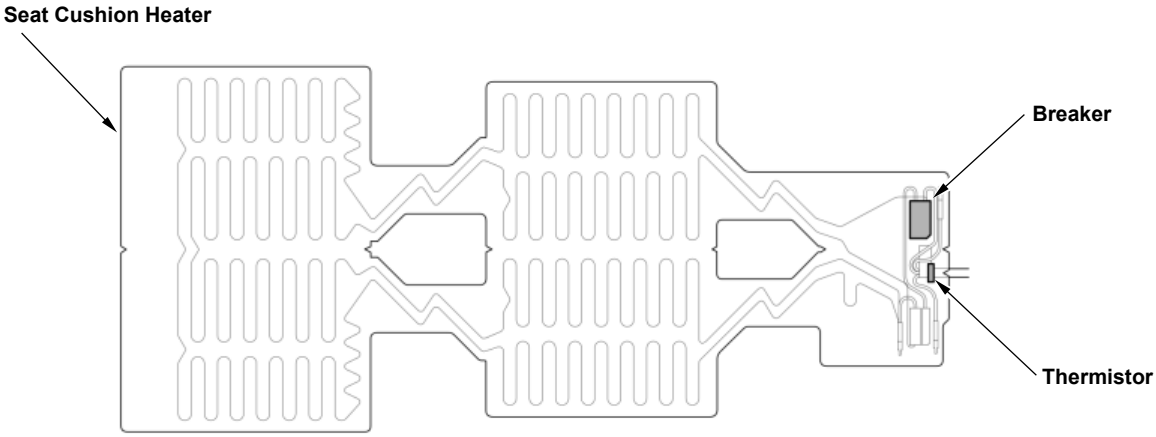
Thermistor and Breaker

The seat cushion heater has a thermistor and breaker. The thermistor and breaker protect the seat heater circuit from overheating. The value of the thermistor is inputted to the control unit.

Front



Rear



Failsafe Function (Front Seat Heaters)

Thermistor Circuit Open Failure

Thermistor circuit open refers to a condition in which the value of the thermistor built in the seat cushion heater continues to be higher than the threshold value for a few seconds. When the control unit detects a shift from the normal operation condition to this condition, it stops the seat heater operation and turns off the seat heater switch indicators.

Thermistor Circuit Short Failure

Thermistor circuit short refers to a condition in which the value of the thermistor built in the seat cushion heater continues to be lower than the threshold value for a few seconds. When the control unit detects a shift from the normal operation condition to this condition, it stops the seat heater operation and turns off the seat heater switch indicators.

Heater Circuit Current Error

When the control unit detects an abnormal current value in the heater circuit, it stops the heater output immediately after detection and turns off the seat heater switch indicators.