

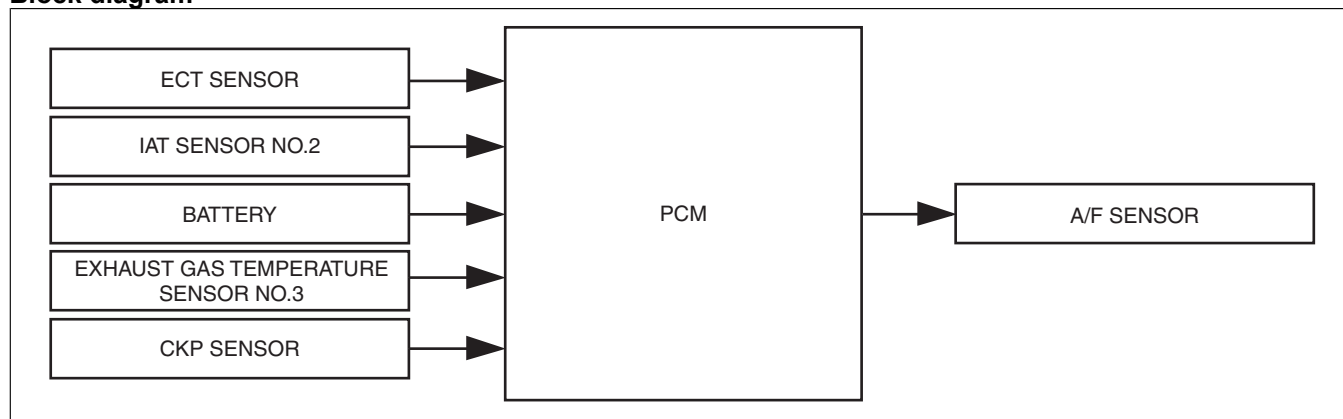
AIR FUEL RATIO (A/F) SENSOR HEATER CONTROL [SKYACTIV-D 2.2]

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Outline

- By activating the A/F sensor using the A/F sensor heater, stable detection of the oxygen concentration is possible even when the exhaust gas temperature is low.
- When the exhaust gas temperature is high, energization to the A/F sensor heater is stopped to protect the A/F sensor from a rise in temperature.

Block diagram



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Operation

- The PCM operates the A/F sensor heater when the following control conditions are met:

Output duty value	Control conditions
0 %	When any of the following conditions is met <ul style="list-style-type: none">• Ignition is switched off• Engine is stopped• Engine is being started (cranking)
0—100 % (Duty ratio determined by measuring the element temperature from the A/F sensor heater element impedance)	When the following conditions are all met <ul style="list-style-type: none">• Engine is started and a certain period of time has elapsed (elapsed time after engine start is calculated based on exhaust gas temperature)• Battery voltage: 9—16 V