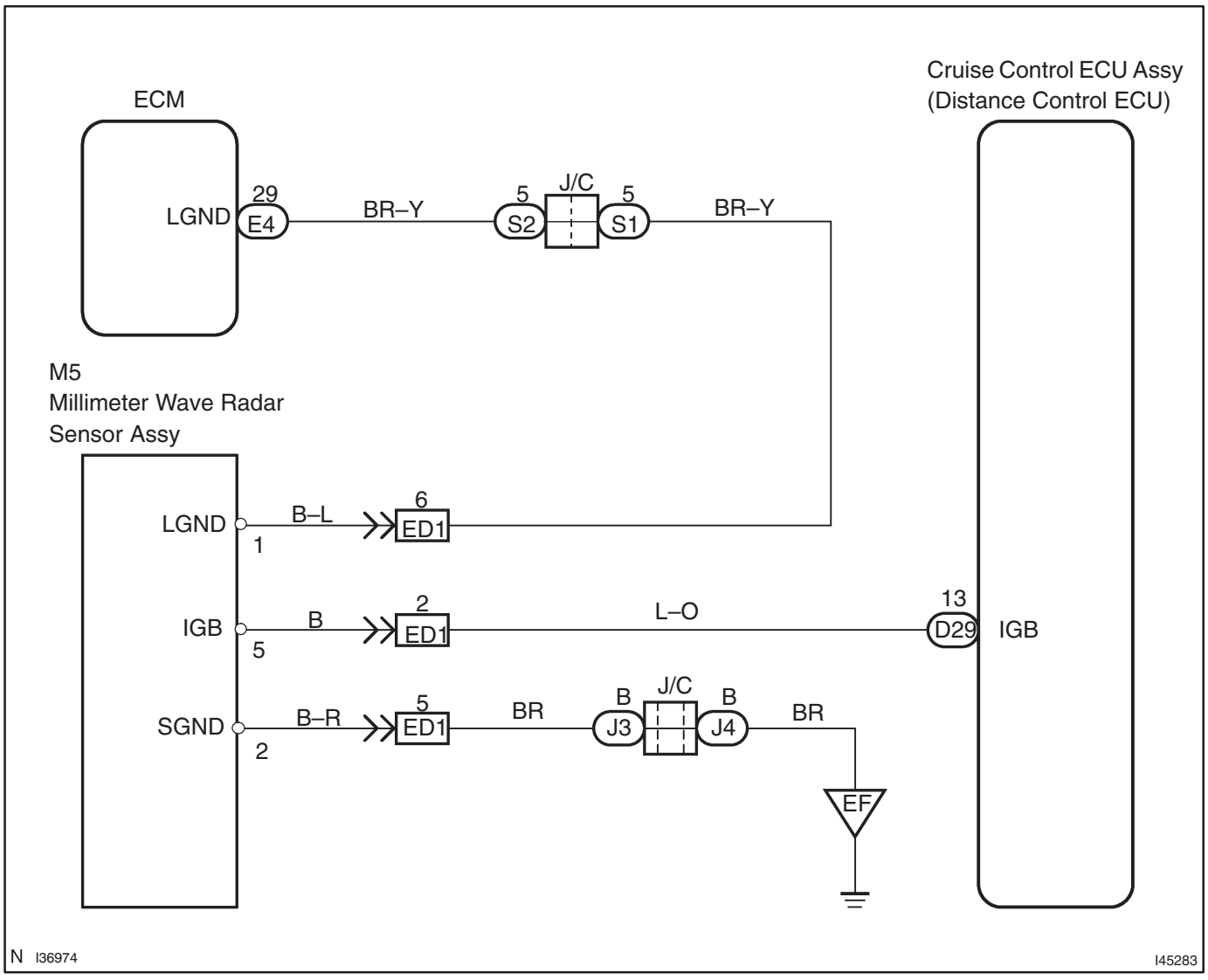
MILLIMETER WAVE RADAR SENSOR POWER SOURCE CIRCUIT

CIRCUIT DESCRIPTION

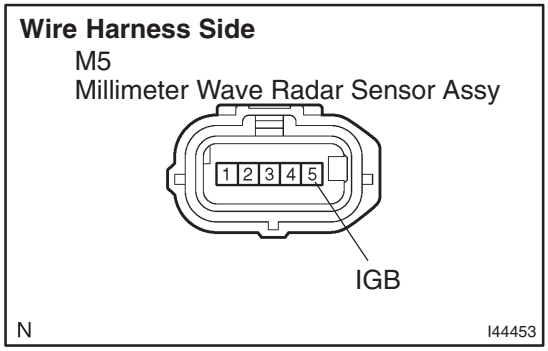
This circuit provides power to the millimeter wave radar sensor.
The millimeter wave radar sensor emits radio waves towards an object in front and measures the distance and direction of the object by receiving the beam reflections. Based on the reflections, the sensor calculates the difference in speed between own vehicle and the object in front. This data is transmitted to the cruise control ECU (distance control ECU).

WIRING DIAGRAM



INSPECTION PROCEDURE

1 CHECK CRUISE CONTROL ECU (IGB VOLTAGE)



(a) Disconnect M5 sensor connector.
(b) Measure the voltage of the wire harness side connector.

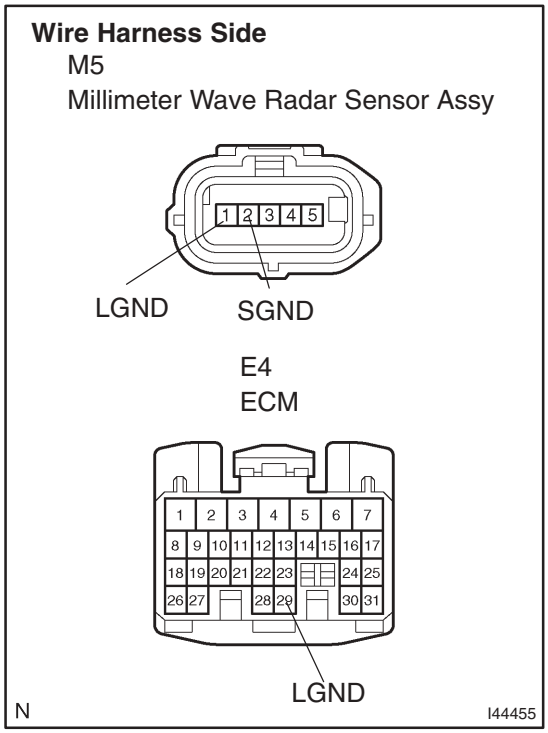
Standard:

Tester Connection	Condition	Specified Condition
M5–5 (IGB) – Body ground	Ignition switch ON	10 to 14 V

NG → **Go to step 3**

OK

2 CHECK WIRE HARNESS (MILLIMETER WAVE RADAR SENSOR ASSY – ECM AND BODY GROUND)



(a) Disconnect the M5 sensor connector.
(b) Disconnect the E4 ECM connector.
(c) Measure the resistance of the wire harness side connectors.

Standard:

Tester Connection	Specified Condition
M5–1 (LGND) – E4–29 (LGND)	Below 1 Ω
M5–1 (LGND) – Body ground	10 kΩ or higher
M5–2 (SGND) – Body ground	Below 1 Ω

NG → **REPAIR OR REPLACE HARNESS AND CONNECTOR**

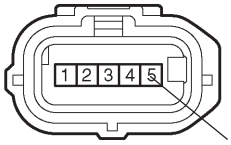
OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE
(See page 05–20)

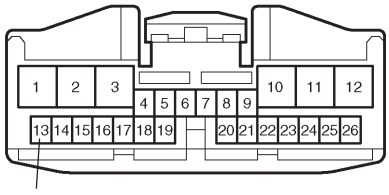
3	CHECK WIRE HARNESS (MILLIMETER WAVE RADAR SENSOR ASSY – CRUISE CONTROL ECU ASSY)

Wire Harness Side

M5
Millimeter Wave Radar Sensor Assy



D29
Distance Control ECU Assy



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(a) Disconnect the M5 sensor connector.
(b) Disconnect the D29 ECU connector.
(c) Measure the resistance of the wire harness side connectors.

Standard:

Tester Connection	Specified Condition
M5–5 (IGB) – D29–13 (IGB)	Below 1 Ω
D29–13 (IGB) – Body ground	10 kΩ or higher

NG → **REPAIR OR REPLACE HARNESS AND CONNECTOR**

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE
(See page 05–20)