

Operational Description:

The DUT is named ESR 2.5T, which stands for Electronically Scanned Radar Version 2.5. The “T” indicates “Truck” program.

The Device Under Test (DUT) is a 76.5 GHz vehicular radar. The device employs a dynamic chirp modulated transmit array. Multiple receive antennas are used to determine target angular resolution through digital beam forming. When installed on a vehicle, the device will operate when the vehicle is running. The nominal operating voltage is 24.0 VDC.

System Requirements

The Radar is part of an automotive adaptive cruise control (ACC) system. The vehicle control functions are performed by a separate Controller supplied by Delphi. The Radar is responsible for the sensing functions only. The Radar measures the following parameters and provides these to the Controller:

Parameter	Operational Range
Range	1 meters to 175 meters (long range operation) 1 to 60m (medium range operation)
Range Rate	-100 meters/sec to +40meters/sec
Angle	+/-10 degrees
Data Update Rate	20 Hz