



THERMAL ANALYSIS OF VEHICLE MOUNT COMPUTER



SCOPE

- // To perform a steady state natural convection thermal simulation on VMC to evaluate the operating temperature of internal components and heat dissipation through given enclosure.

HIGHLIGHTS

- // Total heat dissipation from the system was 18.2 W
- // Steady state natural convection with radiation
- // Package level thermal modeling of processors
- // Orthotropic thermal conductivity was calculated to account for directional behavior of PCBs

DELIVERABLES

- // Detailed thermal analysis report comprising of temperature contours on different components, internal air temperature at different sections and vectors showing convection plumes motion. Also, 4 design changes were proposed to customer to improve the thermal performance of system.

BUSINESS IMPACT

- // 20% Product Cost Optimization
- // Test Time Reduced by 30%