

2-29. A car can accelerate uniformly on a straight-line road from rest to 25 m/s during 20 seconds. Then the car is assumed to travel with a constant velocity. The car is subjected to a normally distributed friction force $F_f \sim N(7500, 750^2)$ N . If the mass of the car is $m \sim N(2500, 20^2)$ kg , determine the maximum power supplied. Assume F_f and m are independent.

Solution: $P_{\max} \sim N(265.63, 18.76^2)$ kW .

