

ABSTRACT

According to one embodiment, a rotor includes a shaft and a rotor core fixed to the shaft. A plurality of flux barriers are formed at the rotor core. Each of the flux barriers is formed with a plurality of bridges, and one or more barrier regions that have a lower permeability than a portion other than each of the flux barriers in the rotor core between the plurality of bridges. A permanent magnet is provided in at least one of the barrier regions. A magnetizing direction of the permanent magnet is directed in a direction that intersects a longitudinal direction of the flux barrier. A value of $(\mu_0 \times S_M \times B_r) / (\mu_{re} \times t_{FB} \times w_B)$ is within a range between 1.2 and 3.0.