

ABSTRACT

Experiments on Electron Cyclotron Heating power modulation have been carried out on DIII-D tokamak with a gyrotron generating about 900 kW and operating at the second cyclotron harmonic, to investigate the power deposition in the plasma, to characterize the microwave beam, and to study electron thermal transport. To this end the 110 GHz Gycom Centaur gyrotron output has been modulated in the range 50–300 Hz. The ECH power deposition, beam propagation, and the plasma thermal diffusivity have been investigated by using the cross-correlation between the incident ECH power and the electron temperature reaction.