

Accelerating Structure with Separated Modular Resonators Working in 300 MHz Frequency Band, for High Power Electron Accelerator, ATENA, J. BIGOLAS, S. KULINSKI, W. MACISZEWSKI, M. PACHAN, E. PLAWSKI, Soltan Inst., Swierk - In the paper, design calculations and optimisation procedures of accelerating cavities and beam dynamics and transport are described. Motivations for frequency-band selection and modular construction are presented. The proposed accelerator can deliver electron beam in energy range 6 to 10 MeV, and average beam power 20 to 50 kW (and higher if necessary) and is easily adaptable to operation requirements in radiation chemistry and material technology.