

RF Parameters for Rectangular Accelerating Structures, M. FILTZ, H. HENKE; Technische Universitaet Berlin - At very high frequencies accelerating structures will have to be planar in order to be suited for modern micromechanical fabrication. Typical geometries are ladder or muffin-tin structures. Both are essentially rectangular. Although a specific structure has to be calculated numerically, it is often convenient to use single-mode approximations or a very fast code for an interactive approach. We present a field-matching code for rectangular periodic accelerating structures which calculates the basic RF parameters, such as frequency, R upon Q (longitudinal and transverse), Q-value, attenuation, Brillouin-diagram, field pattern, in a fast way. We also give for highly relativistic particles a single-mode approximation for the synchronous monopole and dipole space harmonics.