Abstracts

Calculation of Quasi-Planar Lines for mm-Wave Application

Dispersion of the phase-coefficient and the wave-impedance of slot-line, coplanar-strip-line. suspended-substrate line, and six different fin lines is calculated in one uniform treatment applying Galerkin's method on the electric interface fields. Results are presented at fin-line examples in the 8 and 3 mm wavelength regions, showing advantageous properties of the considered structures, expecially of the newly presented antipodal-fin line, which allows an impedance variation from about 10 Omega to over 400 Omega. Tested applications are detectors, PIN-attenuators, coax to dielectric-line transition, and balanced-signal mixer, all for broadband application.

❏ Return to main document.