Abstract:

Ferromagnetic material is widely used to realize the phase shift section of a phased array antenna. In this paper, the performance of a microstrip array feeder with integrated phase-shifter, designed on a transversely magnetized ferrite substrate, is described. Calculated differential phase shift and its tuning properties are presented and compared with the results obtained from a commercial CAD tool. The simulated reflection and transmission response of the integrated array feeder is corroborated by experimental data.