Abstracts

High-Temperature Superconductor Meander-Antenna

H. Chaloupka, H. Piel, A. Pischke, G. Gieres, M. Peiniger, L. Schultz, M. Bode and J. Schubert. "High-Temperature Superconductor Meander-Antenna." 1992 MTT-S International Microwave Symposium Digest 92.1 (1992 Vol. I [MWSYM]): 189-192.

A novel type of an electrically small multiresonant microstrip antenna is presented. It possesses a bandpass frequency response characterized by a bandwidth which can be chosen to be relatively wide with respect to the small size of the antenna. Due to the miniaturization and especially the required narrow line - width of the strip conductors a sufficiently high radiation efficiency can only be achieved by the utilization of superconductive material. Experimental results for a 4.2 GHz version of this multi-resonant meander antenna made from the high - T/sub c/ super-conductor YBCO epitaxially grown on LsAIO/sub 3/ with a size of lambda/sub 0// 10 indicate a half - power bandwidth of 4% and a radiation efficiency of more than 60% at 77 K.

❑ Return to main document.