Abstracts

Performance of a Four-Element Ka-Band High-Temperature Superconducting Microstrip Antenna

M.A. Richard, K.B. Bhasin, C. Gilbert, S. Metzler, G. Koepf and P.C. Claspy. "Performance of a Four-Element Ka-Band High-Temperature Superconducting Microstrip Antenna." 1992 Microwave and Guided Wave Letters 2.4 (Apr. 1992 [MGWL]): 143-145.

Superconducting four-element microstrip array antennas operating at 30 GHz have been designed and fabricated on a lanthanum aluminate (LaAlO/sub 3/) substrates. The experimental performance of these thin film Y-Ba-Cu-O superconducting antennas is compared with that of identical antenna patterned with evaporated gold. Efficiency measurements of these antennas show an improvement of 2 dB at 70 K and as much as 3.5 dB at 40 K in the superconducting antenna over the gold antenna.

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