Abstracts

A novel HTS microstrip quasi-elliptic function bandpass filter using pseudo-lumped element resonator

B.K. Jeon, J.H. Kim, C.J. Lee, B.C. Min, Y.H. Choi, S.K. Kim and B. Oh. "A novel HTS microstrip quasi-elliptic function bandpass filter using pseudo-lumped element resonator." 2000 MTT-S International Microwave Symposium Digest 00.2 (2000 Vol. II [MWSYM]): 1197-1200.

This paper presents a new HTS microstrip bandpass filter structure using pseudo-lumped resonator. Quasi elliptic function filter characteristics were obtained using nonadjacent couplings among the resonators. The new structure has the advantage of compactness and simplicity for the design and the realization. In this paper, a seven-pole quasi-elliptic function bandpass filter on LaAlO/sub 3/ substrate is designed and fabricated. The filter has an insertion loss of 0.8 dB at 20 K, a bandwidth of 8 MHz at the center frequency of 1774 MHz, and an attenuation of 33 dB for the cut-off-band of 1 MHz.

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