

Abstracts

A Direct-Coupled Lambda/4-Coaxial Resonator Bandpass Filter for Land Mobile Communications

K. Hano, H. Kohriyama and K.-I. Sawamoto. "A Direct-Coupled Lambda/4-Coaxial Resonator Bandpass Filter for Land Mobile Communications." 1986 Transactions on Microwave Theory and Techniques 34.9 (Sep. 1986 [T-MTT]): 972-976.

A bandpass filter operating at 870 MHz was constructed using lambda/4-coaxial resonators. The resonators were made of metallized high- Q dielectric ceramic ($Q \geq 10\,000$, $\epsilon_r = 37$), and were directly coupled to each other through apertures which were formed on the outer side surface of the resonators. In order to couple the input and output resonators to the external circuit, a rectangular metal film was deposited on the open-circuit end. The resonant frequency of each resonator, coupling coefficients between adjacent resonators, and external Q's at both ends were adjusted before assembly. The resonators were then assembled in a housing with no further adjustment. The measured response was in excellent agreement with the theory.

 [Return to main document.](#)