Abstracts

Design of Interdigitated Capacitors and Their Application to Gallium Arsenide Monolithic Filters

R. Esfandiari, D.W. Maki and M. Siracusa. "Design of Interdigitated Capacitors and Their Application to Gallium Arsenide Monolithic Filters." 1983 Transactions on Microwave Theory and Techniques 31.1 (Jan. 1983 [T-MTT] (Joint Special Issue on Monolithic Microwave IC's)): 57-64.

Theoretical expressions for the interelectrode capacitance and conductor losses for an array of microstrip transmission lines are presented. The effect of finite conductor thickness is included in the analysis by introducing equations for the effective width of the transmission lines. Good agreement between theory and experiment is observed up to 18 GHz. Experimental results obtained from a lumped-element GaAs monolithic bandpass filter are in excellent agreement with theory. The filter has 1.5-dB insertion loss at 11.95 GHz and greater than 22-dB loss in the stopband. The filter measures 0.58x 1.3x0.203 mm.

❑ Return to main document.