Abstracts

A novel tap input coupling structure for a narrow bandpass filter using TM/sub 010/ mode of a microstrip circular-disk resonator

K.S.K. Yeo and M.J. Lancaster. "A novel tap input coupling structure for a narrow bandpass filter using TM/sub 010/ mode of a microstrip circular-disk resonator." 2002 Transactions on Microwave Theory and Techniques 50.4 (Apr. 2002 [T-MTT]): 1230-1232.

This paper discusses a new method to couple into the TM/sub 010/ mode of a microstrip circular-disk resonator. This method can achieve reasonably strong input coupling, which is useful for narrow-band filters with fractional bandwidths of approximately 0.5% and above. A comparison between this newly proposed input coupling structure and the conventional gap input coupling structure will be addressed. A decision threshold for using either the tap input or the conventional gap-coupled input is also explained. Experimental results of a filter fabricated using this novel input coupling structure is also presented.

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