Abstracts

A new design of microwave filters by using continuously varying transmission lines

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This paper outlines a new original method for microwave filter design. A cubic spline interpolation is used to design a filter with a continuously changing profile. Then, the scattering parameters of a non-uniform transmission line with a cubic polynomial variation of its characteristic impedance are studied in detail in the frequency domain. In order to validate this method, a wideband bandstop filter consisting in a non-uniform microstrip line with continuously varying width was optimized, designed, constructed and measured.

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