

Reflection Coefficient Transformations for Phase-Shift Circuits

H.A. Atwater. "Reflection Coefficient Transformations for Phase-Shift Circuits." 1980 Transactions on Microwave Theory and Techniques 28.6 (Jun. 1980 [T-MTT]): 563-568.

It is shown how switchable one-port circuits having two impedance states may be transformed so as to exhibit reflection coefficients which have a prescribed phase angle difference and equal magnitude in the two states. In reflection-type phase shifters, arbitrary phase shift may be obtained without change of signal amplitude. The reflection properties are achieved by the use of an impedance-transforming two-port network. Design equations and an example are given.

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