

# Abstracts

## New Differential Phase Shift Networks Combining All-Pass and Band-Pass Elements

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*J.K. Hunton. "New Differential Phase Shift Networks Combining All-Pass and Band-Pass Elements." 1981 MTT-S International Microwave Symposium Digest 81.1 (1981 [MWSYM]): 223-225.*

Networks capable of producing differential phase shifts of any value up to  $180^\circ$  with bandwidths as large as 3:1 have been investigated by using computer optimization techniques. A new class of networks that combine band-pass (lines and stubs in ladder form) and all-pass (C-sections) has evolved with performance comparable to that of the cascaded C-section networks described by Schiffman and others. In most cases the new networks are more easily realized, more easily adjusted or tuned, and require less reference-line length.

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