Abstracts

Microwave filtering realized through incoherent optical processing

C. Fraser and M.J. Lancaster. "Microwave filtering realized through incoherent optical processing." 1997 Microwave and Guided Wave Letters 7.8 (Aug. 1997 [MGWL]): 225-226.

Analogue microwave filters can be produced using optical components when the microwave signal is modulated onto an optical carrier wave, processed optically, and then recovered electrically. The fiber-optic network presented here displays a bandpass filter response to the modulating signal. The processing operation is based on the transversal tapped delay line technique forming an infinite impulse response structure. By employing an incoherent optical carrier wave for signal transmission, the structure's responses are modelled using linear discrete signal processing techniques.

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