Abstracts

Quasi-Optical Low-Pass Filters which Attenuate by Absorption (1969 [MWSYM])

G.L. Matthaei and D.A. Leedom. "Quasi-Optical Low-Pass Filters which Attenuate by Absorption (1969 [MWSYM])." 1969 G-MTT International Microwave Symposium Digest of Technical Papers 69.1 (1969 [MWSYM]): 238-242.

This paper deals with low-pass filters for quasi-optical microwave, millimeter-wave, or possibly infrared systems where the energy is channeled by focused-beam transmission lines, or by oversized waveguide. Most filters previously studied for applications of these types have been of the kind which attenuate in their stop-bands by reflecting the energy whereas the type of quasi-optical filter to be discussed herein is quite different in that the stop-band attenuation is achieved by absorbing the incident energy. This feature eliminates possible undesirable interaction effects between the filter and the rest of the system. Also, this particular type of filter structure is very attractive in that it has a large stop-band width, and it appears that the stop-band is relatively unaffected by the presence of higher-order modes.

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