

# Abstracts

## Magnetic Frequency-Tunable Millimeter-Wave Filter Design Using Metallic Thin Films (Short Papers)

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*H. How, T.-M. Fang and C. Vittoria. "Magnetic Frequency-Tunable Millimeter-Wave Filter Design Using Metallic Thin Films (Short Papers)." 1995 Transactions on Microwave Theory and Techniques 43.7 (Jul. 1995, Part I [T-MTT]): 1620-1623.*

Frequency tunable millimeter wave filters are considered to be fabricated using metallic ferromagnetic thin films. Whereas conventional filters which include insulating ferrite materials utilize the phenomenon of ferromagnetic resonance (FMR), our design incorporates the phenomenon of ferromagnetic anti-resonance (FMAR). Our calculations indicate that in comparing the characteristics of the two types of filters the filter utilizing magnetic metal films is superior in terms of insertion loss and integrability with other planar millimeter wave devices. Design of band-pass filter can be realized in which the transmission frequency occurs at FMAR frequency with a frequency bandwidth equal to the FMAR linewidth.

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