Abstracts

Frequency Selective Surfaces with Applications in Microwaves and Optics

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There are numerous applications at microwave and optical frequencies for frequency selective surfaces, e.g., perforated screens which can either be freestanding or printed on dielectric substrates (see Figure 1). At optical frequencies, these surfaces can be used as mirrors for solar power applications, where it is desired to selectively filter out the UV or IR radiation, while retaining the visible range of the spectrum. These surfaces also find important application at far-infrared where they can be used for enhancing the spectral purity of a laser. Other applications at far-infrared include filtering and beam-splitting, as described in a review article by Uhlrich. At microwave frequencies, frequency selective surfaces are employed in radomes and satellite antennas.

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