Abstracts

Frequency-selective surface for microwave power transmission

Zhi Liang Wang, K. Hashimoto, N. Shinohara and H. Matsumoto. "Frequency-selective surface for microwave power transmission." 1999 Transactions on Microwave Theory and Techniques 47.10 (Oct. 1999 [T-MTT]): 2039-2042.

Using an equivalent-circuit model, frequency-selective surfaces (FSS's) with gridded- and double-square elements have been designed and tested for suppressing the harmonics radiation in microwave power transmission system. It is shown that the angular sensitivity of the frequency response of the FSS arrays can be reduced with a combination of TE- and TM-polarized incident waves or a circularly polarized incident waves instead of a single TE- or TM-polarized incident wave. The FSS arrays have also been measured in a microwave anechoic chamber and a good agreement is obtained between the theoretical calculations and experimental results.

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