

Abstracts

A Novel Technique for Increasing the Scanning Range of Infinite Arrays of Microstrip Patches

*R.B. Waterhouse. "A Novel Technique for Increasing the Scanning Range of Infinite Arrays of Microstrip Patches." 1993 *Microwave and Guided Wave Letters* 3.12 (Dec. 1993 [MGWL]): 450-452.*

A novel technique to reduce the magnitude of the active reflection coefficient at large scan angles for microstrip patch arrays is proposed. The method involves loading each element of the array with a varactor diode and then varying the bias to the varactor in order to reduce the impedance mismatch at the appropriate scan angle. A rigorous full-wave analysis in conjunction with an equivalent circuit model of the varactor diode was implemented to analyze the proposed loaded patch array. Significant improvement in the scan performance of the array was predicted using this technique.

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