Abstracts

Wide Band Microstrip Phased Array for Mobile Satellite Communications

R. Telikepalli, P.C. Strickland, K.R. McKay and J.S. Wight. "Wide Band Microstrip Phased Array for Mobile Satellite Communications." 1995 Transactions on Microwave Theory and Techniques 43.7 (Jul. 1995, Part II [T-MTT] (Special Issue on Emerging Commercial and Consumer Circuits, Systems, and Their Applications)): 1758-1763.

A low profile, dual frequency, microstrip phased array has been designed and developed for INMARSAT (International Maritime Satellite organization) land mobile satellite communications. The purpose of the array was to provide a wide band coverage, right-hand circular polarization with a high gain and minimum sidelobe levels in the principal planes. The developed array has a measured frequency bandwidth of 10% with a VSWR of 1.5, a minimum gain of 12 dBic, a gain to noise temperature ratio of -8.98 dB/K, sidelobe levels 13 dB below the beam peak in both the principal planes. The size of the array was 47 cm in diameter and 1.3 cm thick including a flush mounted light weight radome with the elements and the feed lines on the same layer.

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