Abstracts

Ring-coupled-oscillator sequentially rotated active antenna

Suidong Yang, V.F. Fusco and D.E.J. Humphrey. "Ring-coupled-oscillator sequentially rotated active antenna." 2001 Transactions on Microwave Theory and Techniques 49.8 (Aug. 2001 [T-MTT] (Mini-Special Issue on the 2000 IEEE Radio and Wireless Conference (RAWCON))): 1492-1497.

In this paper, an active four-element patch antenna, backed by four GaAs monolithic-microwave integrated-circuit (MMIC) 4.4-GHz oscillators, self-locked by mutual coupling through a lumped capacitive ring MMIC network, has been designed, fabricated, and tested. The sequentially rotated arrangement given here when augmented with a lumped capacitive coupling network suggests that in-phase oscillator entrainment is guaranteed so that spatial power combination by the antenna array occurs with circular polarization characteristics.

❑ Return to main document.