Abstracts

Novel active antenna amplifying arrays

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This paper presents a novel idea that the power is fed from the patch antenna coupler to form a five-element Chebyshev active antenna FET amplifying linear array. An equivalent lumped element circuit was developed to model the mutual coupling having good agreement with experiments. The power level coupled to the transmission line can be controlled by adjusting the length and the gap of the transmission line. The active patch-fed antenna coupler array has the advantages of a single input port, no power divider required, good and controllable radiation patterns, ease of bias, and compactness.

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