Abstracts

An MMAC C-Band FET Feedback Power Amplifier

A.K. Ezzeddine, H.-L.A. Hung and H.C. Huang. "An MMAC C-Band FET Feedback Power Amplifier." 1990 Transactions on Microwave Theory and Techniques 38.4 (Apr. 1990 [T-MTT]): 350-357.

A new feedback power amplifier using miniaturized microwave active circuit (MMAC) technology has been developed for satellite C-band applications. This design demonstrates for the first time that a strong negative feedback can be implemented in the microwave frequencies to improve amplifier linearity and output power over a 750 MHz bandwidth. The amplifier provides a third-order intermodulation distortion improvement of 7 to 9 dB across the band at backoff, compared to results obtained using the conventional approach without feedback. The theory, proof-of-concept experiment, design, and MMAC implementation of the feedback amplifier are presented.

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