# Abstracts

## Noise and power optimization of a MMIC quasi-circulator

*A. Gasmi, B. Huyart, E. Bergeault and L. Jallet. "Noise and power optimization of a MMIC quasi-circulator." 1997 Transactions on Microwave Theory and Techniques 45.9 (Sep. 1997 [T-MTT]): 1572-1577.*

This paper first sums up the power and noise limits of various types of active circulators and quasi-circulators. It then presents the design and measured performances of a narrow-band quasi-circulator module tailored for use in a transmit/receive (T/R) module. Its design implements an active power divider and a combiner, a method to calculate the minimum noise figure is presented for this circuit. At 4 GHz, the device demonstrates a noise figure of 5.5 dB and an output power of 18 dBm with associated gains of 4 and 7.6 dB for the receive and transmit path, respectively. The third-order intercept point (IP3) is equal to 25.6 dBm for the transmit path.

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