Abstracts

Resistive Mixing and Parametric Up-Conversion of Microwave Optoelectronic Signals in a Microstrip Ring Resonator

G.K. Gopalakrishnan, B.W. Fairchild, C.L. Yeh, C.S. Park, K. Chang, M.H. Weichold and H.F. Taylor. "Resistive Mixing and Parametric Up-Conversion of Microwave Optoelectronic Signals in a Microstrip Ring Resonator." 1991 MTT-S International Microwave Symposium Digest 91.2 (1991 Vol. II [MWSYM]): 589-592.

A novel microwave optoelectronic mixer is fabricated on semi-insulating GaAs by monolithically integrating Schottky diode photodetectors into a microstrip ring resonator. Resistive mixing occurs when the conductance of the detector is modulated, and parametric amplification occurs when the capacitive reactance of the detector is modulated. The results should impact future fiber-optic communication systems.

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