

Abstracts

A balanced diode grid mixer

R.R. Swisher, F. Lecuyer, I.F. Chio, Jung-Chih Chiao and M.P. De Lisio. "A balanced diode grid mixer." 1999 MTT-S International Microwave Symposium Digest 99.2 (1999 Vol. II [MWSYM]): 555-558 vol.2.

We report the first results from a planar 16-element balanced quasi-optical diode mixer grid. Each unit cell contains four Schottky diodes arranged in a quad bridge configuration. We report a conversion loss of 14 dB at an RF frequency of 3.44 GHz, an IF frequency of 340 MHz, and an incident LO power of 7.3 /spl mu/W per diode. We report a third-order intercept of 4.7 dBm. Antenna pattern and polarizer tuning curves are presented, and our results are compared with theoretical predictions.

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