

# Abstracts

## A novel phase noise reduction technique in oscillators using defected ground structure

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Young-Taek Lee, Jong-Sik Lim, Jun-Seok Park, D. Ahn and Sangwook Nam. "A novel phase noise reduction technique in oscillators using defected ground structure." 2002 *Microwave and Wireless Components Letters* 12.2 (Feb. 2002 [MWCL]): 39-41.

A new technique to reduce the phase noise in microwave oscillators is developed using the resonant characteristic of the defected ground structure (DGS). Two kinds of oscillators have been designed and measured for the examination of the reduction of phase noise by the DGS. The first adopts the DGS section under the microstrip line at the gate circuit, while the second has only the conventional microstrip line. Measurement shows reduced phase noise by 10-15 dB in the oscillator with the DGS compared to the conventional one.

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