

Abstracts

How to increase locking range of coupled oscillator cells without lowering Q

Jinjin Shen and L.W. Pearson. "How to increase locking range of coupled oscillator cells without lowering Q." 2002 MTT-S International Microwave Symposium Digest 02.2 (2002 Vol. II [MWSYM]): 1309-1312 vol.2.

The locking-range and phase error caused by the random free-running frequency distribution in coupled oscillator phased arrays are studied. A design method based on coupling optimization is proposed to improve the oscillator locking-range and thereby reduce the phase error. A qualitative analysis and experimental results are presented to demonstrate the viability of this method for improving the fabrication tolerance of coupled oscillator phased arrays.

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