



Photonic-delay technique for phase-noise measurement of microwave oscillators

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Abstract

A photonic-delay line is used as a frequency discriminator for measurement of the phase noise—hence the short-term frequency stability—of microwave oscillators. The scheme is suitable for electronic and photonic oscillators, including the optoelectronic oscillator, mode lock lasers, and other types of rf and microwave pulsed optical sources. The approach is inherently suitable for a wide range of frequency without reconfiguration, which is important for the measurement of tunable oscillators. It is also insensitive to a moderate frequency drift without the need for phase locking.

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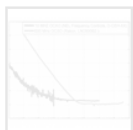
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