

# Abstracts

## Close-In Carrier Phase Noise of Laser with Coherent Feedback

---

*T.-D. Ni, X. Zhang and A.S. Daryoush. "Close-In Carrier Phase Noise of Laser with Coherent Feedback." 1994 MTT-S International Microwave Symposium Digest 94.1 (1994 Vol. I [MWSYM]): 61-64.*

The residual phase noise at close-in carrier offset frequency is studied for optical links using a laser diode with an external optical feedback. The external cavity is designed to enhance the fourth harmonic of a reference signal while maintaining a high dynamic range for data signals. FM noise degradation of the modulating signal was measured to be insignificantly higher than intuitively expected  $20\log(N)$ . Therefore, the residual phase noise is measured to quantify the noise floor level of the laser diodes.

[Return to main document.](#)