Abstracts

60 GHz millimeter-wave source using two-mode injection-locking of a Fabry-Perot slave laser

M. Ogusu, K. Inagaki and Y. Mizuguchi. "60 GHz millimeter-wave source using two-mode injection-locking of a Fabry-Perot slave laser." 2001 Microwave and Wireless Components Letters 11.3 (Mar. 2001 [MWCL]): 101-103.

We demonstrate 60 GHz carrier generation and transmission using a two-mode injection-locked Fabry-Perot (F-P) slave laser. The relationship between the power of the generated carriers and the frequency of the reference signal for the injection-locking is also investigated. The RF power-penalty caused by fiber dispersion was within 2.0 dB when the locked modes were transmitted at a distance of 0.5-48 km. Accordingly, the two-mode locked F-P laser can be used in fiber-based millimeter-wave systems.

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