Abstracts

Fiber-Optic Transport and RF Phase Control of Narrowband Millimeter-Wave Signals Using Multicontact Monolithic Semiconductor Lasers

J.B. Georges, R.A. Lux, D.M. Cutrer, S.P. Yeung and K.Y. Lau. "Fiber-Optic Transport and RF Phase Control of Narrowband Millimeter-Wave Signals Using Multicontact Monolithic Semiconductor Lasers." 1996 MTT-S International Microwave Symposium Digest 96.3 (1996 Vol. III [MWSYM]): 1555-1558.

We demonstrate simultaneous fiber-optic transport and continuous RF phase control of narrowband millimeter-wave signals using a three-section monolithic Distributed Bragg Reflector (DBR) laser. By injection-locking the laser at the cavity round-trip resonant frequency of 45 GHz, 360° of continuous, linear RF phase control of the input mm-wave signal is achieved by simply varying the bias current into the laser.

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