Abstracts

A 7-13 GHz Low-Noise Tuned Optical Front-End Amplifier for Heterodyne Transmission System Application

F. Ebskamp, G. Sehiellerup and M. Hogdal. "A 7-13 GHz Low-Noise Tuned Optical Front-End Amplifier for Heterodyne Transmission System Application." 1991 MTT-S International Microwave Symposium Digest 91.2 (1991 Vol. II [MWSYM]): 585-588.

We present a 7-13 GHz low-noise bandpass tuned optical front-end amplifier, showing 46 ± 1 dBOmega transimpedance, and a noise spectral density around 12 pA//spl radic/Hz. This is the first time such a flat response and low noise were obtained simultaneously at these frequencies, without any further equalization. The front-end was used in an optical 2.5 Gbit/s coherent CPFSK system experiment, resulting in a sensitivity of -41.7 dBm at BER = 10/sup -9.

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