

Reduced flicker noise in microwave oscillators using feedforward amplifiers

J.K.A. Everard and C. Broomfield. "Reduced flicker noise in microwave oscillators using feedforward amplifiers." 2001 MTT-S International Microwave Symposium Digest 01.3 (2001 Vol. III [MWSYM]): 1431-1434 vol.3.

Transposed flicker noise removal is demonstrated in a 7.6 GHz microwave oscillator for offsets greater than 10 kHz. This is achieved by using a GaAs based feedforward power amplifier as the oscillation sustaining stage. 20 dB noise suppression is demonstrated at 12.5 kHz offset when the error correcting amplifier is switched on. The phase noise rolls-off at $(1/\text{spl } \Delta F)^2$ for offsets greater than 10 kHz and is therefore set by the thermal noise to within 0-2 dB of the theoretical minimum.

 [Return to main document.](#)