# Abstracts

## Microwave Quenchable Oscillators - A New Class

*A.P.S. Khanna, R.T. Oyafuso, R. Soohoo and J. Huynh. "Microwave Quenchable Oscillators - A New Class." 1989 MTT-S International Microwave Symposium Digest 89.1 (1989 Vol. I [MWSYM]): 515-518.*

A new class of fast-switching oscillators is presented, in which the oscillations are switched on and off without affecting the device bias conditions by quenching the negative resistance with a PIN diode. The quenching technique, applicable to all types of oscillators, makes possible the realization of fast-switching, fast-settling, spurious-free wideband multi-oscillator assemblies. The speed of operation is demonstrated by a Ku-band VCO which settles within 1 MHz of its final frequency and a Ku-band DRO which settles within 100 kHz of its final frequency within 1 µs after the output is switched on using the PIN-diode quenching technique. The same PIN-diode control can be used in a "partial quenching" mode for control of output power level, and for harmonic reduction.

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