

# Abstracts

## X-Band Solid-State Oscillator and Mixer

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*W.B. Day and W.M. Jones. "X-Band Solid-State Oscillator and Mixer." 1969 G-MTT International Microwave Symposium Digest of Technical Papers 69.1 (1969 [MWSYM]): 278-280.*

An oscillator/mixer assembly has been developed which employs an avalanche transit-time oscillator (ATTO) as the local oscillator for a wide band mixer. The oscillator is electrically tunable from 7.5 to 11.5 GHz, with a yttrium-iron-garnet toroid as the principal tuning element, and the overall single side-band noise figure of the assembly varies from 9 db (at center of band) to 11 db at the band edges. When used with a klystron local oscillator the mixer displays a noise figure of less than 9 db over this frequency range.

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