

# Abstracts

## 140 GHz All Solid State Receiver with System Noise Figure Less Than 6 dB DSB

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*J. Putnam, A. Cardiasmenos, P. Boyd and M. Blustine. "140 GHz All Solid State Receiver with System Noise Figure Less Than 6 dB DSB." 1980 MTT-S International Microwave Symposium Digest 80.1 (1980 [MWSYM]): 17-18.*

This paper describes implementation of beam lead GaAs diodes in a suspended stripline mixer at 140 GHz to obtain noise figures of less than 6 dB DSB. This compares quite favorably with previous commercial practice, where total receiver noise figures of less than 10 dB DSB were rarely obtained. These low overall noise figures were achieved over an instantaneous bandwidth of greater than 1000 MHz, while requiring only 3.5 mW from an integrated all solid state local oscillator source. Construction details for both the mixer-preamplifier and all the solid state L.O. source will be presented.

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