

# Abstracts

## High Quality X-Band Monolithic Diode Mixer

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*A.W. Jacomb-Hood, J.R. Smith and L.G. Hipwood. "High Quality X-Band Monolithic Diode Mixer." 1983 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 83.1 (1983 [MCS]): 1-4.*

A mixer analysis program has been used to design a single balanced MMIC diode mixer. The predicted conversion loss is better than 6 dB over 2 GHz B.W. at X-band and the input VSWR is better than 2:1. An inter-mesa airbridge technique has been developed to provide low parasitic connections to the diode. Also 0.6 dB insertion loss Lange couplers have been demonstrated and via holes have been successfully etched through 200  $\mu$  of GaAs.

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