Abstracts

Design and Performance of a Broadband MIC Low Noise K-Band Balanced Mixer, Polar Discriminator and Related Components

A.K. Gorwara, D.R. Chambers, U. Gysel and D. Parker. "Design and Performance of a Broadband MIC Low Noise K-Band Balanced Mixer, Polar Discriminator and Related Components." 1975 MTT-S International Microwave Symposium Digest of Technical Papers 75.1 (1975 [MWSYM]): 140-142.

The design and experimental performance of a broadband (18-26.5 GHz) single balanced mixer, polar discriminator and related components fabricated in microstrip on 0.010-inch thick gold plated sapphire is described. Typical conversion loss of 7.5 dB with a maximum of 8.5 dB at the top of the band was achieved in the mixer. The output polar angle of the discriminator is linear within ±15° with an input signal level of -14 dBm. Full utilization of planar techniques is made that could also be applicable for frequencies up to and above 60 GHz.

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