# Abstracts

## A 100 GHz SIS Quasiparticle Mixer with 10 dB Coupled Gain

*A.V. Raisanen, D.G. Crete, P.L. Richards and F.L. Lloyd. "A 100 GHz SIS Quasiparticle Mixer with 10 dB Coupled Gain." 1987 MTT-S International Microwave Symposium Digest 87.2 (1987 Vol. II [MWSYM]): 929-930.*

We have tested a superconducting qussiparticle mixer for 85-110 GHz which gives much larger coupled gain than has been previously observed. When operated with a negative dynamic resistance of about 2000 Omega, the maximum coupled gain was G/sub M/(DSB)= 12.5 ± 0.5 dB [G/sub M/(SSB)= 9.5 ± 2.5 dB]. The associated mixer noise temperature was 15.9 K (DSB). Large gain was also observed with large positive dynamic resistance, giving the lowest mixer noise temperature of 12.4 K (DSB).

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