Abstracts

Sampling circuit on silicon substrate for frequencies beyond 50 GHz

P. Abele, M. Birk, D. Behammer, H. Kibbel, A. Trasser, P. Maier, K.-B. Schad, E. Sonmez and H. Schumacher. "Sampling circuit on silicon substrate for frequencies beyond 50 GHz." 2002 MTT-S International Microwave Symposium Digest 02.3 (2002 Vol. III [MWSYM]): 1681-1684 vol.3.

We have fabricated and measured a sampling circuit on high resistivity silicon substrate. The circuit incorporates a nonlinear transmission line to provide the sampling pulses. The sampling circuit was measured up to 50 GHz, with a voltage conversion loss lower than 11 dB and varying in this range by just 2.3 dB. This is the first presentation of a sampling circuit on silicon substrate with a corner frequency beyond 50 GHz.

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