Abstracts

A 25 GHz down-converter integrated with a CPW-fed lens antenna

A. Yamada and T. Matsui. "A 25 GHz down-converter integrated with a CPW-fed lens antenna." 2000 MTT-S International Microwave Symposium Digest 00.3 (2000 Vol. III [MWSYM]): 1689-1692.

A novel 25 GHz down-converter integrated with a CPW-fed lens antenna in the same package has been developed. This converter consists of an alumina substrate, a quartz lens, and a package. The substrate has a multi-slot antenna, a 3-stage LNA, a subharmonically pumped mixer, and filters. Although the size and distance of the lens are not large enough to satisfy the condition of geometrical optics approximation, the lens is effective in increasing the antenna gain. An antenna gain of 16.2 dBi for the 40 mm/spl phi/-lens is achieved.

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