Abstracts

Axially Symmetric Fabry-Perot Power Combiner with Active Devices Mounted on Both the Mirrors

M. Sanagi, E. Yamamoto and S. Nogi. "Axially Symmetric Fabry-Perot Power Combiner with Active Devices Mounted on Both the Mirrors." 1996 MTT-S International Microwave Symposium Digest 96.3 (1996 Vol. III [MWSYM]): 1259-1262.

We investigate an axially symmetrical Fabry-Perot power combiner with many more active devices operating in axially symmetric TEM/sub01n/ mode, which has an excellent feature of uniform device-field coupling required for high power combining efficiency. By numerical calculation using the boundary element method, it was shown that high combining efficiency can be obtained when a circular groove of larger radius is installed on either the plane mirror or the concave mirror. In experiments at X-band, almost perfect power combining of twenty or twenty-four devices mounted on both the mirror was achieved.

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