Abstracts

Analysis of Cascaded Quasi-Optical Grids

S.C. Bundy, W.A. Shiroma and Z.B. Popovic. "Analysis of Cascaded Quasi-Optical Grids." 1995 MTT-S International Microwave Symposium Digest 95.2 (1995 Vol. II [MWSYM]): 601-604.

A general analysis method for cascaded grids is presented. The method is based on a full-wave theory for arbitrary periodic metal gratings printed on dielectrics and loaded with active or passive lumped devices. Each quasi-optical component is characterized by a multiport network, in which two of the ports represent the free-space regions on both sides of the grid surface, and the remaining ports are connected to the lumped loads. This approach allows cascading of quasi-optical components using transmission-line theory. Experimental validation between 2-18 GHz is presented for cascaded gratings loaded with lumped capacitors and resistors.

❑ Return to main document.