

Abstracts

Mode Analytical Study of Cylindrical Cavity Power Combiners

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A mode analytical treatment of cylindrical cavity power combiners is presented to discuss power-combining capability and the method for attaining stable desired mode operation. Both the conventional coaxial-probe output type and the window output type are treated, based on a circuit model which can support TM_{010} , TM_{020} , and TM_{m10} modes ($1 \leq m \leq N$, N being the number of active devices employed). It is shown that adoption of the window output largely facilitates undesired mode suppression and also enables power combining in some azimuthal modes.

[Return to main document.](#)