

Abstracts

New Compact Broadband High-Efficiency Mode Converters for High Power Microwave Tubes with TE_{0n} or TM_{0n} Mode Outputs

M.J. Buckley, G.H. Luo and R.J. Vernon. "New Compact Broadband High-Efficiency Mode Converters for High Power Microwave Tubes with TE_{0n} or TM_{0n} Mode Outputs." 1988 MTT-S International Microwave Symposium Digest 88.2 (1988 Vol. II [MWSYM]): 797-800.

New shorter, broader bandwidth designs are discussed for TE₀₃-TE₀₂ and TE₀₂-TE₀₁ varying-radius mode converters and TE₀₁-TE₁₁ serpentine mode converters for a 2.779 cm diameter circular waveguide for 60 and 140 GHz gyrotrons. Designs combining TE_{0n}-TE_{0n-1} converters with a 6.35-2.779 cm diameter taper are presented. A TM₀₁-TE₁₁ serpentine mode converter design for a frequency of 8.6 GHz in a 4.76 cm circular waveguide is also discussed. Measured results are presented.

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