

Abstracts

A New Cylindrical Electron Gun for Low-Power Tunable Gyrotrons with High Magnetic Compression Ratios (Short Papers)

J. Y.L. Ma. "A New Cylindrical Electron Gun for Low-Power Tunable Gyrotrons with High Magnetic Compression Ratios (Short Papers)." 1985 *Transactions on Microwave Theory and Techniques* 33.4 (Apr. 1985 [T-MTT]): 323-327.

Because of the high magnetic compression ratio required, electrons in the Sydney University tunable gyrotron undergo multiple reflections before entering the resonant cavity. This results in unstable and unpredictable operation. A new cylindrical gun has been designed and fabricated. Computer simulations have predicted favorable broad-band behavior, and this has been confirmed by testing in the tunable gyrotron.

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