

# Abstracts

## A Single-Period TE<sub>02</sub> -TE<sub>01</sub> Mode Converter in a Highly Overmoded Circular Waveguide

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*M.J. Buckley, D.A. Stein and R.J. Vernon. "A Single-Period TE<sub>02</sub> -TE<sub>01</sub> Mode Converter in a Highly Overmoded Circular Waveguide." 1991 *Transactions on Microwave Theory and Techniques* 39.8 (Aug. 1991 [T-MTT]): 1301-1306.*

A single-period 60 GHz TE<sub>02</sub> -TE<sub>01</sub> mode converter for use in an electron cyclotron heating (ECH) system for magnetically confined plasmas is presented. The mode converter is very compact and has a broad bandwidth and a theoretical conversion efficiency of 97.6%. A method of computing the reflection from mode converters is presented and used to show that reflection from the single-period mode converter is minimal. Experimental results are consistent with theoretical calculations.

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