

Title (en)

Converter for the guided propagation mode of electromagnetic waves, and electronic tube incorporating such a converter.

Title (de)

Wandler für die geführte Übertragungsmode elektromagnetischer Wellen, und elektronisches Rohr mit solchem Wandler.

Title (fr)

Convertisseur de mode de propagation guidée des ondes électromagnétiques, et tube électronique comportant un tel convertisseur.

Publication

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Application

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Priority

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Abstract (en)

The present invention proposes a convertor for the guided propagation mode of electromagnetic waves, including a transition structure and means of coupling between this structure and a waveguide able to propagate the mode resulting from the mode conversion, and also comprising means of coupling between the transition structure and a waveguide or a source of microwave electromagnetic energy. According to a significant characteristic of the invention, the said transition structure comprises l waveguides ($g_1, g_2, \dots g_l$), l being an integer number greater than 1, chosen as a function of the TE l m mode to be converted (m also being an integer number greater than or equal to 1); these l guides being coupled at their two ends, by coupling holes, respectively to a source of microwave electromagnetic energy or to a guide (G_1) in which a TE l m wave of complex structure propagates, on the one hand, and on the other hand to a waveguide (G_2) able to propagate the mode resulting from the conversion. According to another significant characteristic of the invention, the transition structure comprising l waveguides is coupled directly onto the output cavity of a microwave tube; and, according to another characteristic, the said microwave tube is a gyrotron. <IMAGE>

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CPC (source: EP)

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Citation (search report)

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