

Title (en)
Waveguide apparatus.

Title (de)
Wellenleitervorrichtung.

Title (fr)
Dispositif à guides d'ondes.

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Application
EP 89305128 A 19890519

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Abstract (en)
Waveguide apparatus for transforming signals between the TE₁₀ mode and a circular mode, shown in schematic exploded form, includes a Magic-T 10 in which the H-plane port 11 is terminated. A signal in the TE₁₀ mode is applied to its E-plane port 8, resulting in signals in the TE₁₀ mode being produced at its outputs 12 and 13, the field being in opposite senses. The outputs 12 and 13 are arranged adjacent one another so that the effective output of the Magic-T 10 is a signal in the TE₂₀ mode. This is applied to a short taper 14 having an aperture therethrough, this being of rectangular section in the face adjacent the Magic-T output ports 12 and 13 and of cruciform section at the other face. The taper 14 is followed by a spacer 15 and iris 16 having a cruciform aperture therethrough. The application of the signal in the TE₂₀ mode at the Magic-T outputs 12 and 13 results in an output signal in the TE₀₁ mode being launched in the circular waveguide following the iris 16. The apparatus may also be used to transform a TE₀₁ applied to the iris 16 into an output signal at the E-plane port 8 in the TE₁₀ mode.

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H01P 1/067 (2013.01); **H01P 1/163** (2013.01)

Citation (search report)

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