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Patent Number(s): WO2012076995-A1
Title: Corrugated component for transmitting and manipulating electromagnetic signals, has plate assemblies stacked together in hollow guiding rod, where external shape plate assemblies corresponds to internal shape hollow guiding rod
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Abstract: NOVELTY - The component has a set plate assemblies stacked together in a hollow guiding rod (6), where the plate assemblies have a circular aperture shape with alternating size to form a slot or a ridge in alternate fashion. External shape the plate assemblies corresponds to an internal shape the hollow guiding rod. The aperture shape is fixed along the component. Apertures the plates are utilized for cooling the component. Two auto-aligning flanges are respectively connected to two rods, where the flanges cooperates together to allow connection the rods.
USE - Corrugated component for transmitting and manipulating electromagnetic signals with frequencies from 30 GHz to 100 THz.
ADVANTAGE - The component includes rings whose thickness is alternatively varied, so as to create corrugation with suited slot and ridge. The rings are shaped on outer edge with indentations, so as to reduce friction against the internal wall the hollow guiding rod. The component creates, links and aligns longer segments waveguides, so as to avoid signal deterioration at the junctions, avoid influencing on the alignment, and employ to disconnect segments the transmission line by the flanges, thus removing elements perpendicularly to the main waveguide axis.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a method for forming corrugated components.
DESCRIPTION DRAWING(S) - The drawing shows an exploded perspective view a corrugated component.
Circular rings (3, 4)
Reference (5)
Hollow guiding rod (6)
Drawing:
Derwent Class Code(s): P56 (Machine tools); W02 (Broadcasting, Radio and Line Transmission Systems)
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