

Title (en)
Multi-port microwave coupler.

Title (de)
Mikrowellenkoppler mit mehreren Öffnungen.

Title (fr)
Coupleur micro-ondes multi-ports.

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Application
EP 92306540 A 19920716

Priority
GB 9115581 A 19910718

Abstract (en)
A multi-port microwave coupler has eight input ports In 1, In 2, In 3, In 4, In 5, In 6, In 7 and In 8 and eight output ports Out 1, Out 2, Out 3, Out 4, Out 5, Out 6, Out 7 and Out 8 and is synthesised from twelve 2 X 2 hybrid couplers which are arranged as three sets, that is a first set A, B, C and D, a second set E, F, G and H and a third set I, J, K and L. A first group of transmission lines 11, 12, 13, 14, 15, 16, 17 and 18 interconnect the first and second sets of hybrid couplers, and a second group of transmission lines 21, 22, 23, 24, 25, 26, 27, and 28 interconnect the second and third sets of hybrid couplers. The first set of hybrid couplers are arranged substantially in a row in the sequence first, second, fourth and third, that is A, B, D and C with one half of the second and third sets E, G, I and J arranged on one side of the row and with the other half of the second and third sets F, H, K and L on the other side of the row. In this manner all cross-overs in the first and second groups of transmission lines are avoided thereby providing a planar realisation of a 8 X 8 multi-port microwave coupler. Instead of the first set of hybrid couplers being arranged in a row, it is also possible to achieve a similar result by arranging the second set of hybrid couplers in a row in the same sequence. The invention is of application to higher order n x n multi-port microwave couplers where $n = 2(2+p)$ and p is a whole number. <IMAGE>

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H01P 5/16; H01Q 3/40

IPC 8 full level
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Citation (search report)

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