

Title (en)
Adjustable coupling

Title (de)
Einstellbare Kopplung

Title (fr)
Couplage réglable

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Application
EP 06119880 A 20060831

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Abstract (en)
The present invention relates to a microwave filter comprising at least one resonator having electrically conductive walls (2, 3) defining a resonator cavity (4) and a coupling mechanism (7, 7', 7'') for coupling electromagnetic energy into or out of the resonator cavity (4). The coupling mechanism (7, 7', 7'') comprises a through bore (9, 9'') extending through a wall portion (2) of the resonator extending transversely to the wall portion (2), a coupling element (10, 10') extending through the through bore (9, 9'') and comprising a first elongate portion (11b, 11b'') adjacent the opening of the through bore (9, 9'') into the resonator cavity (4) and a second elongate portion (11a, 25) adjacent the opposite opening of the through bore (9, 9''), wherein the first elongate portion (11b, 11b'') projects at least partly into the resonator cavity (4), and wherein the first elongate portion (11b, 11b'') and the second elongate portion (11a, 25) are electrically conductive and arranged such that electromagnetic energy can be transferred between the first elongate portion (11b, 11b'') and the second elongate portion (11a, 25), a dielectric mounting (8) for securing the coupling element (10, 10') in the wall portion (2) such that the coupling element (10, 10') is electrically isolated from the wall portion (2), and an adjustment means (14) operable to selectively change the coupling characteristics of the coupling mechanism (7, 7', 7''). The adjustment means (14) is operable to displace the first elongate portion (11b, 11b'') and the second elongate portion (11a, 25) with respect to each other to thereby selectively advance the first elongate portion (11b, 11b'') from the through bore (9, 9'') into the resonator cavity (4) or retract the first elongate portion (11b, 11b'') from the resonator cavity (4) into the through bore (9, 9'').

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H01P 1/205 (2006.01)

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H01P 1/2053 (2013.01)

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