

Title (en)

Temperature compensation of combline resonators using composite inner conductor

Title (de)

Temperaturkompensation von Kammleitungsformresonatoren mit zusammengesetztem Innenleiter

Title (fr)

Compensation de temperature de resonateurs en forme de peigne en utilisant conducteur interne composite.

Publication

EP 1760824 B1 20100811 (EN)

Application

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Priority

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Abstract (en)

[origin: EP1760824A1] The present invention relates to a coaxial resonator and a method of constructing a coaxial resonator. The inner conductor (6) of the coaxial resonator comprises at least two different materials having different coefficients of thermal expansion. It includes an outer hollow component (9) defining a cavity (11) and comprising a first material having a first coefficient of thermal expansion, and a compensation element (10), that is disposed at least partly within the cavity (11) defined by the outer hollow component (9) and comprises a second material having a second coefficient of thermal expansion different from the first coefficient of thermal expansion. The compensation element (10) is engaged by the outer hollow component (9) at least at two locations spaced in the longitudinal direction of the inner conductor (6) such that the compensation element (10) is secured in the longitudinal direction of the inner conductor (6) within the cavity (11) of the outer hollow component (9). The compensation element (10) is not in threaded engagement with the outer hollow component (9) along the major portion of the length of the compensation element (10) and has dimensions and material characteristics such that a desired temperature dependence of the resonant frequency is achieved.

IPC 8 full level

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CPC (source: EP)

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Cited by

EP2083471A1; EP3547440A1; KR20180114652A; CN103531869A; EP2325940A1; GB2448875B; CN108631027A; EP2323214A1; US9865909B2; US8947179B2; US10505244B2; WO2012084154A1

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