Abstracts

Further Advances in High-Power Electronically Tuned Resonators

A. Karp. "Further Advances in High-Power Electronically Tuned Resonators." 1977 MTT-S International Microwave Symposium Digest 77.1 (1977 [MWSYM]): 163-165.

A new technique for electronically tuning a high-Q resonator was investigated, based on the use of heavy-duty PIN diodes to short out inductive elements that are in series with the transmission line in a half-wavelength cavity. Design relationships were developed and validated for a high-power UHF resonator operated as a bandpass filter. The internal volt-ampere rating of the resonator is 640 kVA, which allows the filter to accommodate 4 kW of RF input power at 0.8% instantaneous loaded bandwidth. The unloaded Q was maintained in the vicinity of 2000 for the 11% tuning range, 350 to 391 MHz.

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