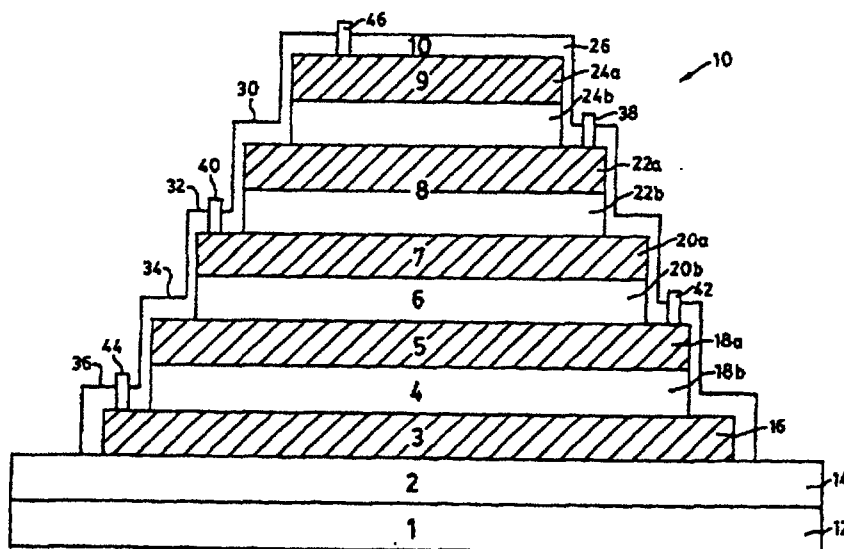




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(54) Title: MULTI-LAYER FILM CAPACITOR STRUCTURES AND METHOD



(57) Abstract

A multi-layer film capacitor structure has a bottom electrode layer (16) on a monolithic substrate (12), intermediate pairs of layers of film electrode (18a, 20a, 22a) and dielectric material (18b, 20b, 22b) overlying the bottom electrode (16), and a top pair of layers of a film electrode (24a) and film dielectric (24b) overlying the intermediate pairs. The structure preferably has a mesa configuration, in which each electrode layer extends laterally beyond the periphery of the layers above it around the entire periphery of the device. Each electrode layer therefore has a top surface which is accessible at its projecting edge through a via, so that the electrodes can be accessed in any combination to permit any desired circuit connection. If desired the dielectric materials can have different frequency characteristics, allowing a single capacitor structure to be optimized for a filter. Either the bottom electrode (16) or the top electrode (24a) or both can be grounded and capacitor connections can be made to intermediate layers, to reduce parasitic capacitance effects.