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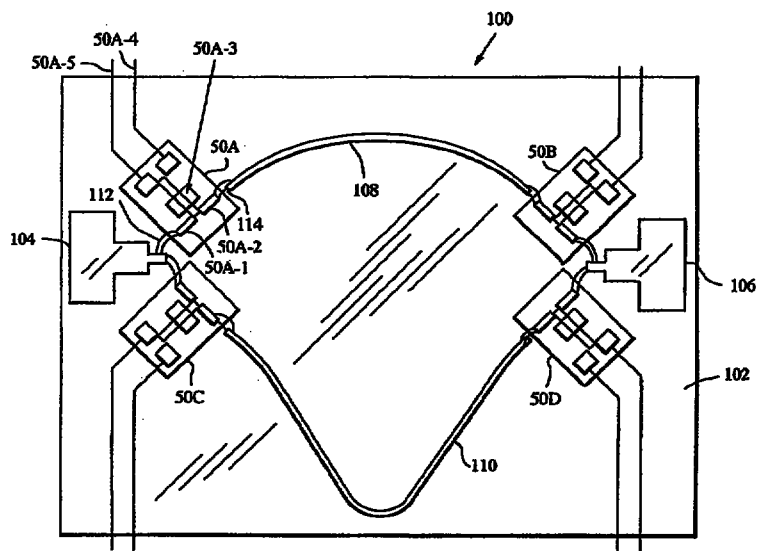
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(54) Title: MULTI-BIT PHASE SHIFTERS USING MEM RF SWITCHES



(57) Abstract: An RF phase shifter circuit includes first and second RF ports (104, 106), and a switch circuit comprising a plurality of micro-electro-mechanical ("MEM") switches (50A-50D) responsive to control signals. The switch circuit is arranged to select one of a plurality of discrete phase shift values introduced by the phase shifter circuit to RF signals passed between the first and second RF ports. The circuits can be connected to provide a single-pole-multiple-throw (SPMT) or multiple-pole-multiple-throw (MPMT) switch function. The SPMT and MPMT switch circuits can be employed in other applications, including switchable attenuators, switchable filter banks, switchable time delay lines, switch matrices and transmit/receive RF switches.