Abstracts

Fully integrated micromachined capacitive switches for RF applications

J.Y. Park, G.H. Kim, K.W. Chung and J.U. Bu. "Fully integrated micromachined capacitive switches for RF applications." 2000 MTT-S International Microwave Symposium Digest 00.1 (2000 Vol. I [MWSYM]): 283-286.

RF micromachined capacitive switches are newly designed and fabricated with various structural geometry of transmission line, hinge, and movable plate formed by using electroplating techniques, low temperature processes, and dry releasing techniques. In particular, Strontium Titanate Oxide (SrTiO/sub 3/) with high dielectric constant is investigated for high switching on/off ratio and on capacitance as a dielectric layer of an integrated capacitive switch. Achieved lowest actuation voltage of the fabricated switches is 8 volts. The fabricated switch has low insertion loss of 0.08 dB at 10 GHz, isolation of 42 dB at 5 GHz, on/off ratio of 600, and on capacitance of 50 pF respectively.

❑ Return to main document.