Abstracts

Lifetime characterization of capacitive RF MEMS switches

C. Goldsmith, J. Ehmke, A. Malczewski, B. Pillans, S. Eshelman, Z. Yao, J. Brank and M. Eberly. "Lifetime characterization of capacitive RF MEMS switches." 2001 MTT-S International Microwave Symposium Digest 01.1 (2001 Vol. I [MWSYM]): 227-230 vol.1.

The first experimental characterization of dielectric charging within capacitive RF MEMS switches has been demonstrated. Standard devices have been inserted into a time domain setup and their lifetimes have been characterized as a function of actuation voltage. Switch lifetimes were measured using a dual-pulse waveform with 30 to 65 V of actuation voltage. Resulting lifetimes were between 10/sup 4/ and 10/sup 8/ switch actuations, demonstrating an exponential relationship between lifetime and actuation voltage.

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