Abstracts

RF power handling of capacitive RF MEMS devices

B. Pillans, J. Kleber, C. Goldsmith and M. Eberly. "RF power handling of capacitive RF MEMS devices." 2002 MTT-S International Microwave Symposium Digest 02.1 (2002 Vol. I [MWSYM]): 329-332 vol.1.

RF MEMS switches provide a low-cost, high-performance solution to many RF/microwave applications. In this paper, progress in characterizing capacitive MEMS devices under high RF power is presented. The switches tested demonstrated power handling capabilities of 510 mW for continuous RF power and 4 W for pulsed RF power. In addition, the reliability of these switches was tested at various power levels indicating that under continuous RF power, the lifetime is not affected until the 510 mW power level is reached. Once a power failure is observed, it is completely recoverable by lowering the RF power level below the threshold point. A description of the power failures and their associated operating conditions is presented.

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