Abstracts

Broad-Band Electromagnetic Radiation Damage in GaAs MESFETs (1992 [MCS])

J.H. McAdoo, W.M. Bollen, W. Catoe and R. Kaul. "Broad-Band Electromagnetic Radiation Damage in GaAs MESFETs (1992 [MCS])." 1992 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 92.1 (1992 [MCS]): 205-208.

A failure mechanism is observed for SiN/sub 2/-passivated metal semiconductor field-effect transistor (MESFET) devices exposed to fast risetime DC video pulses. The intensity of the pulses is about 33% of the value required to cause single-pulse failure. The failure mechanism, which degrades performance by surface flashover and erosion of the passivation layer, eventually leads to sputtering of the gate-source metallization. The results are observed using a combination of optical, electron, and X-ray micrographs, plus MESFET terminal parameters.

❑ Return to main document.