Abstracts

RF-Stressed Life Test of Pseudomorphic InGaAs Power HEMT MMIC at 44 GHz

C.H. Chen, G. Zell, Y. Saito, H.C. Yen, R. Lai, K. Tan and J. Loper. "RF-Stressed Life Test of Pseudomorphic InGaAs Power HEMT MMIC at 44 GHz." 1995 MTT-S International Microwave Symposium Digest 95.2 (1995 Vol. II [MWSYM]): 713-716.

An RF-stressed accelerated life test was performed to establish the reliability of the recently developed high power HEMT MMICs at 44 GHz. The results showed a MTF (median time to failure) of 1.7x10/sup 6/ hours at 125°C channel temperature with the activation energy of 1.6 eV. The failure mode was a gradual output power degradation. A combination of surface states degradation and gate sinking were postulated as the failure mechanisms.

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