Abstracts

Electro-thermal modelling and measurement of thermal time constants and natural convection in spatial power combining grid arrays

W. Batty, A.J. Panks, S. David, R.G. Johnson and C.M. Snowden. "Electro-thermal modelling and measurement of thermal time constants and natural convection in spatial power combining grid arrays." 2000 MTT-S International Microwave Symposium Digest 00.3 (2000 Vol. III [MWSYM]): 1937-1940.

The first theoretical study of thermal time constants in MMIC grid arrays is presented, indicating the significance of time dependent thermal effects for spatial power combining. Model validation against thermal images of passive grid arrays provides the first experimental demonstration of the impact of natural convection on grid array beam forming.

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