

Abstracts

Introduction to the MPM: What It Is and Where It Might Fit

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The Microwave Power Module (MPM) is introduced and described. The synergistic combination of technologies -- MIMIC driver, vacuum power booster, and integrated electronic power conditioning -- has a multitude of advantages for system applications. The MPM is capable of achieving performance not attainable with either solid-state or vacuum-electronics technology alone. Power, efficiency, and noise performance in the 6- to 18-GHz band in a compact lightweight package -- to be available in the first-generation MPM by June 1994 -- will be suitable for selected radar and EW applications. The second-generation MPM will be even more capable and suitable for insertion in a wider range of systems. The background of the MPM Program is detailed; MPM programmatic are presented. To ensure that next-generation MPMs will be even more advantageous to the military and civil system designer, technical challenges that must be met in a variety of technical areas are identified.

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