Abstracts

12 KW S-Band Solid State Transmitter for Modern Radar Systems

M. Hanczor and M. Kumar. "12 KW S-Band Solid State Transmitter for Modern Radar Systems." 1993 MTT-S International Microwave Symposium Digest 93.3 (1993 Vol. III [MWSYM]): 1213-1216.

This paper presents the development of a 12-KW Solid State Transmitter, operating over 2.7 - 2.9 GHz, used in modern surveillance and air-traffic control radars. 12-KW of peak power with a pulse width of 100µs and duty cycle of 10% is achieved by combining 56 300W High Power Solid State Amplifiers. Other key performance parameters are pulse-to-pulse stability (MTI improvement factor of >90dBc), MTBF of >22,000 hours, instantaneous bandwidth of 200 MHz, extremely high pulse fidelity and self pulsing low voltage operation for high efficiency.

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