Abstracts

A 12.5 GHz-Band 50W Solid-State Power Amplifier for Future Broadcasting Satellites

H. Mizuno, H. Mitsumoto and N. Yazawa. "A 12.5 GHz-Band 50W Solid-State Power Amplifier for Future Broadcasting Satellites." 1990 MTT-S International Microwave Symposium Digest 90.3 (1990 Vol. III [MWSYM]): 1337-1340.

We designed and fabricated a 50W solid-state power amplifier (SSPA) utilizing a cylindrical cavity type power combiner with low-insertion loss and a corporate type power divider. The isolation between the input ports of the combiner is studied, The output power of the SSPA is more than 50W over a bandwidth of 12.625±0.125GHz, its efficiency is more than 21.6% including electronic power conditioners (EPCs) (more than 26% excluding the EPCs). The gain is more than 37dB. A thermal vacuum test was put into operation, resulting in satisfactory performance.

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