Abstracts

The generation of 400 MW RF pulses at X-band using resonant delay lines

S.G. Tantawi, A.E. Vlieks and R.J. Loewen. "The generation of 400 MW RF pulses at X-band using resonant delay lines." 1999 MTT-S International Microwave Symposium Digest 99.1 (1999 Vol. I [MWSYM]): 345-348 vol.1.

We present theory and experimental data for a resonant-delay-line pulse-compression system. The system is fed by two high power klystrons at X-band. The output power is four times bigger than the input power. The system produces flat-top output pulses. The system uses evacuated room-temperature copper delay lines as a means of storing energy. These lines achieved a quality factor greater than 4.3/spl times/10/sup 5/, with total losses due to external components measured at 4%. We compare theory with experimental results.

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