Abstracts

2-18 GHz Logarithmic Amplification Componentry

E. Gertel, D.M. Johnson and M. Kumar. "2-18 GHz Logarithmic Amplification Componentry." 1990 MTT-S International Microwave Symposium Digest 90.3 (1990 Vol. III [MWSYM]): 1093-1096.

Two microwave logarithmic amplifier designs are described. First is a dual channel extended dynamic range Detector Logarithmic Video Amplifier (DLVA) design to cover the 2 - 18 GHz frequency band. The DLVA was developed to achieve state-of-the-art accuracy over 65 dB dynamic range, while providing excellent amplitude and phase tracking between the two channels. Amplitude and phase tracking of ±1 dB and ±5 degrees have been achieved, respectively. Second is a Successive Detection Logarithmic Amplifier (SDLA) design to cover the 2 - 6 GHz frequency range. The SDLA was developed to achieve state-of-the-art pulse processing capability. Rise time of 8 ns and recovery time of 30 nsec have been achieved over 70 dB of dynamic range.

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