Abstracts

A 2 W Solid State Transmitter for Short Range Data Communication at 60 GHz

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Three 60 GHz powercombiners are cascaded to amplify a CW input signal of 2 mW up to 2 W. The maximum bandwidth is 1 GHz. In the first stage the incoming signal is split into two equal portions which are amplified by two reflection type Gunn Diode amplifiers. The combined output power (20 mW) of this stage is used to injection lock the two Gunn oscillators of the second combiner. The output of that (180 mW) serves as locking signal of the third stage, where two GaAs IMPATT oscillators (1.2 W each) are synchronized and powercombined. In case of good balance of each combiner only one isolator between the stages is required.

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