

Abstract for an Invited Paper
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Lumped-Element DC-SQUID Microwave Amplifier

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We report on the development at NIST of microwave amplifiers in the 6-8 GHz frequency range using DC SQUIDs. Our design approach is to use small SQUIDs which can be modeled as lumped element circuits, thus separating the design process for the SQUID from that of the microwave impedance transformers. We present our model and measurements of the impedance, gain and noise of these SQUID amplifiers. Furthermore, we discuss how our modular hardware design allows for easy deployment in labs around the world where there is a need for lower noise microwave measurement.