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A broadband microwave study of CVD grown graphene¹ WEI LIU, Johns Hopkins University, CARL MAGNUSON, YUFENG HAO, RODNEY RUOFF, The University of Texas at Austin, PETER ARMITAGE, Johns Hopkins University — We apply a broadband microwave Corbino spectrometer to study the complex conductivity of CVD grown graphene deposited on a high resistivity Si substrate. Explicit frequency dependency of the complex conductivity are obtained down to 300 mK and in a frequency range from 100 MHz to 20 GHz. We compare our data to the low frequency limit of the conductance of different theoretical models and make connection to other experimental results. We will also report measurements of the conductivity using time domain terahertz spectroscopy.

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