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Resistive Losses in Single-Crystal $\mathbf{Ba_{0.6}K_{0.4}Fe_2As_2}$ BRENDAN BENAPFL, University of Notre Dame, CHENGLIN ZHANG, PENGCHENG DAI, University of Tennessee, Knoxville, H.A. BLACKSTEAD, University of Notre Dame — Recently, we conducted surface resistance measurements using electron spin resonance techniques on single-crystal $Ba_{0.6}K_{0.4}Fe_2As_2$ samples (*rf* frequency = 20.3 GHz), testing temperature and field dependence. In the superconducting state, the samples exhibit dissipative losses which increase monotonically as a function of applied field for fixed temperature. The level of field-dependent dissipation increases as T approaches T_C from below, and vanishes at the transition. The dissipation is also dependent on the angle between the *rf* field and the static field, consistent with flux-flow models of other high-temperature superconductors, such as YBCO.

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