

Abstract Submitted
for the MAR06 Meeting of
The American Physical Society

Impedance matching using superconducting planar spiral inductors UTKU KEMIKTARAK, Physics Department, Boston University, KEITH SCHWAB, Laboratory for Physical Sciences, KAMIL L. EKINCI, Department of Aerospace and Mechanical Engineering, Boston University — We discuss the use of superconducting Nb inductors for impedance matching. The micro-fabricated inductors we used in our experiments had submicron line-widths with 50 to 200 turns. We first characterized these inductors by measuring their inductances, quality factors and self resonance frequencies. Then we compared these results with existing models. With the measured parameters, we showed that these inductors could be used for matching impedances on the order of megaohms to 50Ω .

Utku Kemiktarak
Physics Department, Boston University

Date submitted: 30 Nov 2005

Electronic form version 1.4