

Pair-Breaking Critical Current Density of Two-Band Superconductor MgB₂

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(Received: 2005-2-17; Revised: 2005-4-20)

Abstract: Temperature dependence of the pair-breaking critical current density of MgB₂, $j_d(T)$, is studied using a two-band Ginzburg-Landau theory. The results are shown to be in good agreement with experimental data for the superconducting magnesium diboride MgB₂.

PACS: 74.20.De

Key words: magnesium diboride, two-band superconductivity, Ginzburg-Landau theory, critical current density

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