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Calculation of the external quality factor of the high power input coupler for the BEPC II superconducting cavity

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**摘要** It is very important to predict the coupling between the cavity and the high power input source in the coupler design. In this paper, a time domain method is used to calculate the external quality factor  $Q_{\text{ext}}$  for the BEPC II superconducting cavity. A comparison between simulation results and experimental results is presented. The results of simulation and measurement of  $Q_{\text{ext}}$  have a good agreement within an error of 10%. The geometry parameters related with  $Q_{\text{ext}}$  are also studied.

**关键词** [high power input coupler](#) [external quality factor](#) [superconducting cavity](#)

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