

Kickers and Power Amplifiers for the DAΦNE Bunch-by-Bunch Longitudinal Feedback System,
R. BONI, A. DRAGO, A. GALLO, A. GHIGO,
F. MARCELLINI, M. SERIO, M. ZOBOV, INFN,
Laboratori Nazionali di Frascati - The multibunch operation of the Frascati Φ-Factory DAΦNE calls for a very efficient longitudinal feedback system to damp the coupled bunch instabilities. A bunch-by-bunch feedback scheme, capable of kicking any bunch proportionally to the time derivative of its position error has been adopted. A special longitudinal kicker based on a waveguide overloaded pill box cavity has been designed and fabricated for this task. A broadband linear power amplifier to drive the kicker has been selected and fully characterised. A description of the power section of the longitudinal feedback system, including kicker, power amplifier, broadband circulator, fast amplitude modulator, together with time and frequency domain measurements, is reported in this paper.