

Pulsed Magnets for Injection and Extraction at LSB,
J. CAMPMANY, M. TRAVERIA, LSB, Barcelona, Spain - A synchrotron light source is being designed in Barcelona. The injection to the booster at 0.1 GeV is made with a septum-kicker ensemble as well as the extraction from the booster at 2.5 GeV. The injection to the storage ring requires one septum and four fast bumpers. The septum magnets (1 m of magnetic length) are eddy current type, they are not water cooled and they are placed inside a vacuum vessel. The yoke is made of a silicon-iron alloy. They are excited by a 25 μ s half sine wave. The kicker magnets (0.4 m of length) in the booster are window frame type with a ferrite core. The vacuum chamber made of ceramics goes inside the window. The excitation current has a flat top of 100 ns and a ramping time of 320 ns. The four bumpers (0.4 m of length) in the storage ring are window frame magnets with the yoke made of a silicon-iron alloy. The excitation current is a half sine wave of 8 μ s. All these magnets are feed with conventional AC power systems.