

Coupling Impedance Measurement of Pohang Light Source Storage Ring Vacuum Components*,
D.H. HAN, M. KWON, Y.S. KIM, PAL - Loss factor measurements were carried out for various storage ring vacuum components using the synthetic pulse technique. The measurement was done for bunch lengths (σ_l) ranging from 7.1 to 30 mm. The measured devices were elliptical and circular photon masks, bellows with elliptical and circular cross sections, ellipse-to-diamond transition, ellipse-to-ellipse transition, beam position monitor chamber, and circular T-piece. Broadband impedances were obtained by fitting the measured loss factors to broadband resonator model. The total broadband impedance of 250 devices was 0.17 ohm, which is a small fraction of the total machine impedance budget as expected in the calculation.

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