

Development of a Bellows Assembly with RF Shield for KEKB, K. KANAZAWA and Y. SUETSUGU,
KEK - A bellows assembly with an RF shield has been developed for the KEK B-Factory (KEKB). The RF-shield is a usual finger-type but has a special spring-finger to press contact-fingers to beam tube without fail. To find the optimum contact force, heating test and arcing test was performed using 508 MHz and 2856 MHz microwaves, respectively. The necessary contact force of 50 g/finger was obtained experimentally and reflected to the design. The higher order mode power inside the bellows leaked through the RF-shield was estimated using measured coupling coefficients of the RF shield. The estimated power was about 6 W for the finger length of 20 mm. This paper summarizes these experimental results together with some calculations utilizing numerical codes to supplement the experimental results.