

## FEMTO(20%) 슬라이더의 부상안정성 고찰 Study on the Flying Stability of the FEMTO(20%) Slider

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### ABSTRACT

The areal density of the hard disk drive(HDD) has been increased due to technological advances recently. To achieve the high areal density magnetic recording requires an extremely small gap between the air-bearing surface (ABS) and disk. At the same time, the slider mass and size should be reduced to minimize the physical contact under the operational and environmental conditions. Almost all of 2.5" HDD companies will get ready for adoption of FEMTO slider and already utilized the small slider. FEMTO and small size slider will be mainstream in the 2.5" and other small form factor HDD in the near future. In this study, the flying characteristic of FEMTO slider was examined. Based on the simulation, FEMTO slider is very stable in flying dynamic under the disk modulation, however the flying height sensitivity of the manufacturing tolerances is much bigger than PICO slider. And the other characteristics like impulse response and load/unload dynamic were also examined in this study.