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ABSTRACT

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MAGNETIC RECORDING AND READING DEVICE

Provided is a large-capacity magnetic recording and reading device having a magnetic recording medium, a magnetic head and a circuit enable density to be increased even during recording in high data transfer rate at not less than 50 MB/s. The device has a high data transfer rate of not less than 50 MB/s, comprising a magnetic recording medium, a magnetic head and an R/W-IC. The magnetic recording medium has an absolute value of normalized noise coefficient per recording density of not more than $2.5 \times 10^{-8} (\mu\text{Vrms})(\text{inch}) (\mu\text{m})^{0.5}/(\mu\text{Vpp})$. The magnetic head is given a total inductance reduced to not more than 65 nH because it has a magnetic path with a length of not more than 35 μm , because it is provided with a magnetic film with a resistivity exceeding 50 $\mu\Omega\text{cm}$ or a multilayer film composed of a magnetic film and an insulating film in part of the magnetic path and because it is mounted on an integrated circuit suspension. The R-W-IC has a line width of not more than 0.35 μm and is capable of operating at high rates.

(Figure 3A)