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DESCRIPTION

The TLS21H62 is a BiCMOS, monolithic preamplifier family designed for two-terminal thin-film or MIG recording heads. The device provides data protection circuitry for both channels with low-noise read paths and write-current controls. When deactivated, the device enters an idle mode that reduces power dissipation to 0.5 mW. The write current generator is disabled during power sequencing to provide power supply fault protection.

During write and idle modes, the RDX and RDY lines are put into a high impedance state in order to improve system write-to-read and idle-to-read recovery times. Isolated damping resistors effectively switch out the resistance during read operations by Schottky diode.

FEATURES

- **5 V ± 10 % Power supply**
- **Low power dissipation:**
 - Read mode 115 mW typ
 - Idle mode 0.5 mW typ
- **High performance:**
 - Read mode gain 300 V/V typ
 - Input noise 0.50 nV/ $\sqrt{\text{Hz}}$ typ
 - Input capacitance 8.5 pF typ
 - Write current range 5 mA to 15 mA
- **Designed for two-terminal thin-film or metal-in-gap (MIG) recording head**
- **Programmable write-current source**
- **Power supply fault protection**
- **Write unsafe detection**
- **Schottky - isolated damping resistor**
- **Power up/down protection**

BLOCK DIAGRAM

