

3Gbps, 5000ppm Spread Spectrum SerDes PHY with frequency tracking Phase Interpolator for Serial ATA

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Abstract

We have developed a 5000ppm spread spectrum Serializer / Deserializer (SerDes) physical layer (PHY) chip compliant with Serial AT Attachment (ATA) . The chip was fabricated with a 0.15um 1.5V CMOS process and includes a self-running spread spectrum carrier generator to provide both transmit and receive block, a self-running phase interpolator to recover the +/-5000ppm spread spectrum receive (RX) clock and data.