

## DESCRIPTION

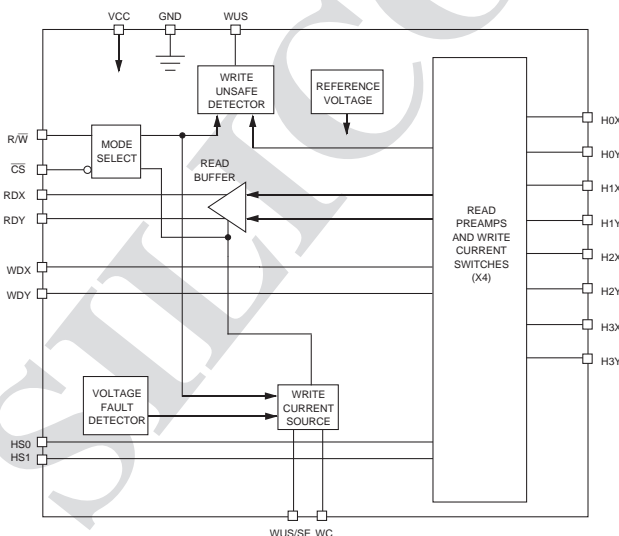
The SSI 32R2416R are BiCMOS monolithic integrated circuits designed for use with two-terminal recording heads. They provide a low noise read amplifier, write current control, and data protection circuitry for up to four channels. The SSI 32R2416R option provides internal 350  $\Omega$  damping resistors. Damping resistors are switched in during write mode and switched out during read mode. The SSI 32R2416 option does not provide damping resistors. Power supply fault protection is provided by disabling the write current generator during power sequencing. System write to read recovery time is significantly improved by making the read channel outputs high impedance. The device also offers multiple channel "servo bank write" capability to assist in servo writing operations.

The SSI 32R2416R requires only a +5 V power supply and are available in a variety of packages. The SSI 32R2416R is pin compatible with the SSI 32R2212R read/write devices.

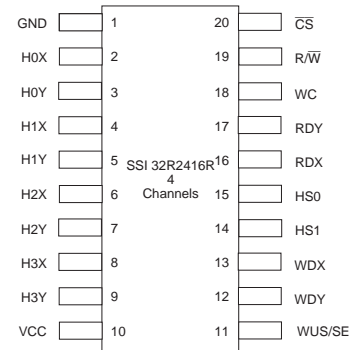
## FEATURES

- **+5 V  $\pm 10\%$  supply**
- **Low power**
  - PD = 165 mW read mode (nominal)
  - PD = 0.35 mW idle (nominal)
- **High Performance:**
  - Read mode gain = 300 V/V
  - Input noise = 0.45 nV/ $\sqrt{\text{Hz}}$  (nominal)
  - Input capacitance = 6 pF (nominal)
  - Write current range = 3-25 mA
  - Nominal write current (10 mA) rise/fall time = 2.3 ns (nominal) (0.5  $\mu\text{H}$  head)
  - Head voltage swing = 8 Vp-p (nominal)
- **Servo bank write capability**
- **Self switching damping resistance**
- **Write unsafe detection**
- **Pin compatible with the SSI 32R2212R**
- **Power supply fault protection**
- **Head short to ground protection**
- **Differential ECL-like write data inputs**

## BLOCK DIAGRAM



## PIN DIAGRAM



20-Lead SOV, SOL

CAUTION: Use handling procedures necessary for a static sensitive component.