

A405

Sample and Hold Amplifier

The A405 Sample and Hold Amplifier is used in the AD15 Analog Subsystem to sample the rapidly varying analog input (25 kHz, minimum) and store the signal level at a particular time to allow an A/D converter to convert the signal to a digital word. The amplifier provides acquisition of a 10V step input to within 1 mV in less than 2 μ s.

Two digital Track Control inputs are provided to control the sample/hold function: pin BF for positive logic and pin BH for negative logic. In positive logic applications, the amplifier will sample (track) when the level at pin BF is high and hold when the level at pin BF is low. For pulsed RS flip-flop control, jumper W1 is removed and jumper W2 is connected. Then, a positive pulse at pin BF sets the flip-flop for tracking and a positive pulse at pin BH resets the flip-flop to hold the signal.

A voltage offset circuit is provided at the input to allow the output signal to be shifted more positive. To use this offset, pin AU is jumpered to pin BJ and pin BM is jumpered to pin AE. (-15V). This circuit is not used on the AD15 Analog Subsystem application.

- INPUTS:** Analog input: ± 10 V range, $2000 \pm 1\%$ ohms
 Digital inputs: Positive logic Track Control at pin BF presents 1 unit load.
 Pulse input to set hold at pin BH presents 1 unit load.
- OUTPUTS:** Analog output: ± 10 V at 10 mA, 0.1 ohm maximum output impedance at pin AV.
- POWER:** +15V at 35 mA at pin AD
 -15V at 40 mA at pin AE (plus additional 11 mA if offset circuit is connected)
 +5V at 15 mA at pin AA