

50MHz, Selectable, Four Channel Video Operational Amplifier

November 1996

Features

- Digital Selection of Input Channel
- Unity Gain Stability
- Gain Flatness to 10MHz. 0.1dB
- Differential Gain 0.03%
- Differential Phase. 0.03 Degrees
- Fast Channel Selection 60ns
- Crosstalk Rejection 60dB

Applications

- Video Multiplexer
- Programmable Gain Amplifier
- Special Effects Processors
- Video Distribution Systems
- Heads-up/Night Vision Displays
- Medical Imaging Systems
- Radar Video

Ordering Information

PART NUMBER	TEMP. RANGE (°C)	PACKAGE	PKG. NO.
HA3-2444-5	0 to 75	16 Ld PDIP	E16.3
HA3-2444-9	-40 to 85	16 Ld PDIP	E16.3
HA9P2444-5	0 to 75	16 Ld SOIC	M16.3
HA9P2444-9	-40 to 85	16 Ld SOIC	M16.3

Description

The HA-2444 is a channel-selectable video op amp consisting of four differential inputs, a single-ended output, and digital control circuitry allowing two digital inputs to activate one of the four differential inputs. The HA-2444 also includes a high impedance output state allowing the outputs of multiple HA-2444s to be wire-OR'd. Functionally, the HA-2444 is equivalent to four wideband video op amps and a wideband multiplexer.

Unlike similar competitor devices, the HA-2444 is not restricted to multiplexing. Any op amp configuration can be used with any of the inputs. Signal amplification, addition, integration, and more can be put under digital control with broadcast quality performance.

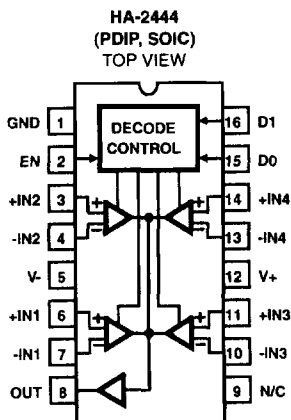
The key video parameters of the HA-2444 have been optimized without compromising DC performance. Gain Flatness to 10MHz is only 0.1dB. Differential gain and phase are typically 0.03% and 0.03 degrees, respectively. Laser trimming allows offset voltages in the 4.0mV range and a unique common current source design assures minimal channel-to-channel mismatch, while maintaining 60dB of crosstalk rejection at 5MHz. Open loop gain of 76dB and low input offset and bias currents enhance the performance of this versatile device.

For information about military grade devices, please refer to the HA-2444/883 data sheet.

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OPERATIONAL
AMPLIFIERS

Pinout



Logic Operation

TRUTH TABLE

EN	D1	D0	SELECTED CHANNEL
H	L	L	1
H	L	H	2
H	H	L	3
H	H	H	4
L	X	X	NONE-OUT is set to a high impedance state.

L = Low State (0.8V Max)
H = High State (2.4V Min)
X = Don't Care