HARRIS SEMICONDUCTOR

HFA1130

November 1996

850MHz, Output Limiting, Low Distortion Current Feedback Operational Amplifier

Features

- User Programmable Output Voltage Limits
- Low Distortion (30MHz, HD2) ..... -56dBc
- -3dB Bandwidth 850MHz
- Very Fast Slew Rate 2300V/µs
- Fast Settling Time (0.1%) 11ns
- Excellent Gain Flatness
  - (100MHz) 0.14dB
  - (50MHz) 0.04dB
  - (30MHz) 0.01dB
- High Output Current 60mA
- Overdrive Recovery ..... <1ns

Applications

- Residue Amplifier
- Video Switching and Routing
- Pulse and Video Amplifiers
- Wideband Amplifiers
- RF/IF Signal Processing
- Flash A/D Driver
- Medical Imaging Systems
- Related Literature
  - AN9420, Current Feedback Theory
  - AN9202, HFA11XX Evaluation Fixture

Description

The HFA1130 is a high speed wideband current feedback amplifier featuring programmable output limits. Built with Harris' proprietary complementary bipolar UHF-1 process, it is the fastest monolithic amplifier available from any semiconductor manufacturer.

This amplifier is the ideal choice for high frequency applications requiring output limiting, especially those needing ultra fast overdrive recovery times. The output limiting function allows the designer to set the maximum positive and negative output levels, thereby protecting later stages from damage or input saturation. The sub-nanosecond overdrive recovery time quickly returns the amplifier to linear operation, following an overdrive condition.

The HFA1130 offers significant performance improvements over the CLC500/501/502.

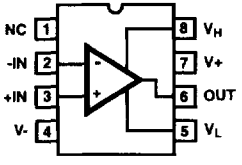
A variety of packages and temperature grades are available. See the ordering information below for details. For /883 product refer to the HFA1130/883 datasheet.

Ordering Information

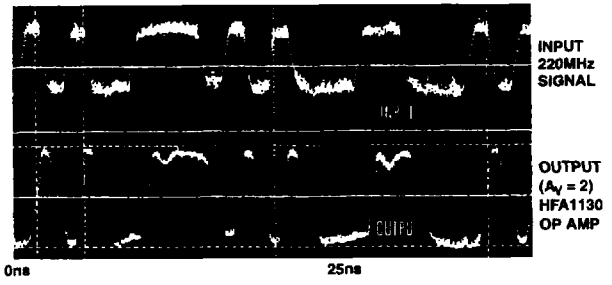
PART NUMBER (BRAND)	TEMP. RANGE (°C)	PACKAGE	PKG. NO.
HFA1130MJ/883	-55 to 125	8 Ld CERDIP	F8.3A
HFA1130IJ	-40 to 85	8 Ld CERDIP	F8.3A
HFA1130IP	-40 to 85	8 Ld PDIP	E8.3
HFA1130IB (H1130I)	-40 to 85	8 Ld SOIC	M8.15
HFA11XXEVAL	DIP Evaluation Board for High-Speed Op Amps		

Pinout

HFA1130
(PDIP, CERDIP, SOIC)
TOP VIEW



The Op Amps With Fastest Edges



CAUTION: These devices are sensitive to electrostatic discharge. Users should follow proper IC Handling Procedures.

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