

850MHz, Low Distortion, Output Limiting, Programmable Gain, Buffer Amplifier

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Features

- User Programmable Output Voltage Limiting
- User Programmable For Closed-Loop Gains of +1, -1 or +2 Without Use of External Resistors
- Wide -3dB Bandwidth 850MHz
- Excellent Gain Flatness (to 100MHz) $\pm 0.07\text{dB}$
- Low Differential Gain and Phase.... 0.02%/0.04 Degrees
- Low Distortion (HD3, 30MHz) -73dBc
- Very Fast Slew Rate 2400V/ μs
- Fast Settling Time (0.1%) 13ns
- High Output Current 60mA
- Excellent Gain Accuracy 0.99V/V
- Overdrive Recovery <1ns
- Standard Operational Amplifier Pinout

Applications

- RF/IF Processors
- Driving Flash A/D Converters
- High-Speed Communications
- Impedance Transformation
- Line Driving
- Video Switching and Routing
- Radar Systems
- Medical Imaging Systems

Description

The HFA1113 is a high speed Buffer featuring user programmable gain and output limiting coupled with ultra high speed performance. This buffer is the ideal choice for high frequency applications requiring output limiting, especially those needing ultra fast overload 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.

A unique feature of the pinout allows the user to select a voltage gain of +1, -1, or +2, without the use of any external components, as described in the "Application Information" section. Compatibility with existing op amp pinouts provides flexibility to upgrade low gain amplifiers, while decreasing component count. Unlike most buffers, the standard pinout provides an upgrade path should a higher closed loop gain be needed at a future date.

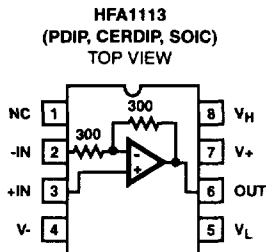
Component and composite video systems will also benefit from this buffer's performance, as indicated by the excellent gain flatness, and 0.02%/0.04 Degree Differential Gain/Phase specifications ($R_L = 150\Omega$).

For Military product, refer to the HFA1113/883 data sheet.

Ordering Information

PART NUMBER (BRAND)	TEMP. RANGE (°C)	PACKAGE	PKG. NO.
HFA1113MJ/883	-55 to 125	8 Ld CERDIP	F8.3A
HFA1113LJ	-40 to 85	8 Ld CERDIP	F8.3A
HFA1113IP	-40 to 85	8 Ld PDIP	E8.3
HFA1113IB (H1113I)	-40 to 85	8 Ld SOIC	M8.15
HFA11XXEVAL	DIP Evaluation Board For High Speed Op Amps		

Pinout



Pin Descriptions

NAME	PIN NUMBER	DESCRIPTION
NC	1	No Connection
-IN	2	Inverting Input
+IN	3	Non-Inverting Input
V-	4	Negative Supply
V _L	5	Lower Output Limit
OUT	6	Output
V+	7	Positive Supply
V _H	8	Upper Output Limit