

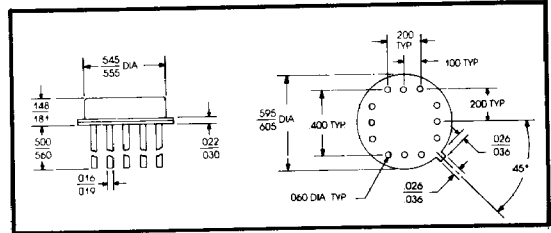
CLH 0033

FAST BUFFER AMPLIFIER

FEATURES

- Wide range single or dual supply operation
- Wide power bandwidth DC to 100 MHz
- High output drive $\pm 10V$ with 50Ω load
- Low phase non-linearity 2 degrees
- Fast rise times 2 ns
- High Current gain 120dB
- High input resistance $10^{10}\Omega$

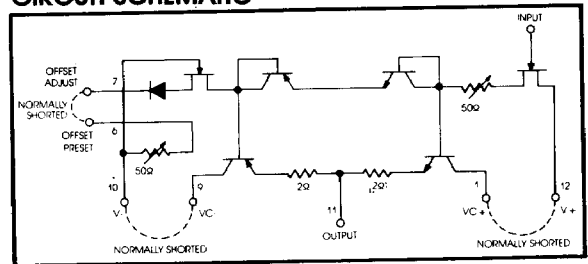
12-LEAD TO-8 Package



MAXIMUM RATINGS

Supply Voltage ($V+ - V-$)	40V
Power Dissipation	1.5W
Junction Temperature	175°C
Input Voltage	Equal to Supplies
Continuous Output Current	$\pm 100mA$
Peak Output Current	$\pm 250mA$
Operating Temperature Range	-55°C to +125°C
Storage Temperature Range	-65°C to +150°C
Lead Temperature (Soldering, 10 sec)	300°C

CIRCUIT SCHEMATIC



DC ELECTRICAL CHARACTERISTICS $V_S = \pm 15V, T_{min} \leq T_A \leq T_{max}$ (Unless otherwise specified)

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNITS
Output Offset Voltage	VOS	$R_S = 100\Omega, T_J = 25^\circ C, V_{IN} = 0V$ (Note 1)		5.0	10	mV
		$R_S = 100\Omega$			15	mV
Average Offset Voltage Drift	$\Delta V_{OS}/\Delta T$	$R_S = 100\Omega, V_{IN} = 0V$		50		$\mu V/^\circ C$
Input Bias Current	I _B	$V_{IN} = 0V$	$T_J = 25^\circ C$ (Note 1)		250	pA
			$T_A = 25^\circ C$ (Note 2)		2.5	nA
			$T_J = T_A = T_{max}$		10	nA
Voltage Gain	A _V	$V_O = \pm 10V, R_S = 100\Omega, R_L = 1.0K\Omega$.97	.98	1.00	V/V
Input Resistance	R _{IN}	$R_L = 1K\Omega$	10^{10}	10^{11}		Ω
Output Impedance	Z _{OUT}	$V_{IN} = \pm 1.0V, R_L = 1.0K$		6.0	10	Ω
Output Voltage Swing	V _O	$V_I = \pm 14V, R_L = 1.0K$	± 12			V
		$V_I = \pm 10.5V, R_L = 100\Omega, T_A = 25^\circ C$	± 9.0			V
Supply Current	I _S	$V_{IN} = 0V$		20	22	mA
Power Consumption	P	$V_{IN} = 0V$		600	660	mW

AC ELECTRICAL CHARACTERISTICS $T_C = 25^\circ C, V_S = \pm 15V, R_S = 50\Omega, R_L = 1.0K\Omega$

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNITS
Slew Rate	SR	$V_{IN} = \pm 10V$	1000	1500		V/ μs
Bandwidth	BW	$V_{IN} = 1.0V_{rms}$		100		MHz
Phase Non-Linearity		$BW = 1.0$ to $20MHz$		2.0		degrees
Rise Time	t _r	$\Delta V_{IN} = 0.5V$		2.9		ns
Propagation Delay	t _{pd}	$\Delta V_{IN} = 0.5V$		1.2		ns
Harmonic Distortion	THD	f > 1KHz		<0.1		%

NOTE 1 — Specified at 25°C junction temperature. When tested under steady state DC conditions VOS and I_B will vary from the 25°C T_J values which result from pulse testing.

NOTE 2 — Measured in still air 7 minutes after application of power.