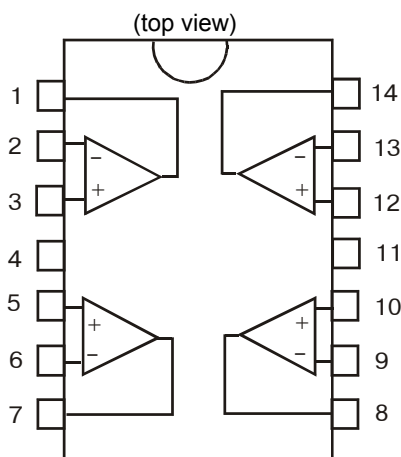


Features

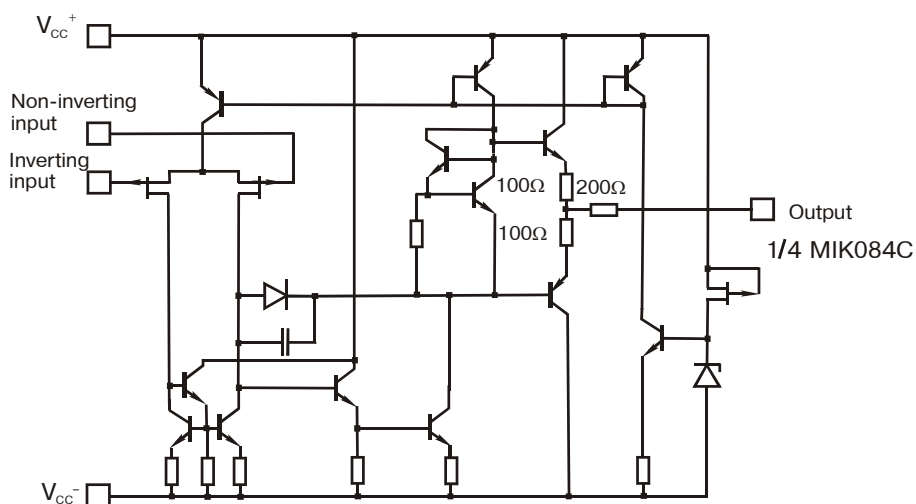
- Low power consumption
- Wide common-mode and differential voltage range
- Low input bias and offset currents
- Output short-circuit protection
- High input impedance J-FET input stage
- Low harmonic distortion: 0.01% (typ)
- Internal frequency compensation
- Latch up free operation
- High slew rate: 13 V/ μ s (typ)

Pin Connections



Pad N	Pad Name
1	Output 1
2	Inverting input 1
3	Non-inverting input 1
4	V_{CC}^+
5	Non-inverting input 2
6	Inverting input 2
7	Output 2
8	Output 3
9	Inverting input 3
10	Non-inverting input 3
11	V_{CC}^-
12	Non-inverting input 4
13	Inverting input 4
14	Output 4

Schematic Diagram



Absolute Maximum Ratings

Symbol	Parameter	Value	Unit
V_{CC}	Supply Voltage – (Note 1)	± 18	V
V_i	Input Voltage – (Note 3)	± 15	V
V_{id}	Differential Input Voltage – (Note 2)	± 30	V
	Output Short-circuit Duration (Note 4)	Infinite	
T_{oper}	Operating Free-Air Temperature Range MIK074C	0 to 70	$^{\circ}$ C

Note 1: All voltage values, except differential voltage, are with respect to the zero reference level (ground) of the supply voltages where the zero reference level is the midpoint between V_{CC}^+ and V_{CC}^- .

Note 2: Differential voltages are at the non-inverting input terminal with respect to the inverting input terminal.

Note 3: The magnitude of the input voltage must never exceed the magnitude of the supply voltage or 15 volts, whichever is less.

Note 4: The output may be shorted to ground or to either supply. Temperature and/or supply voltages must be limited to ensure that the dissipation rating is not exceeded.

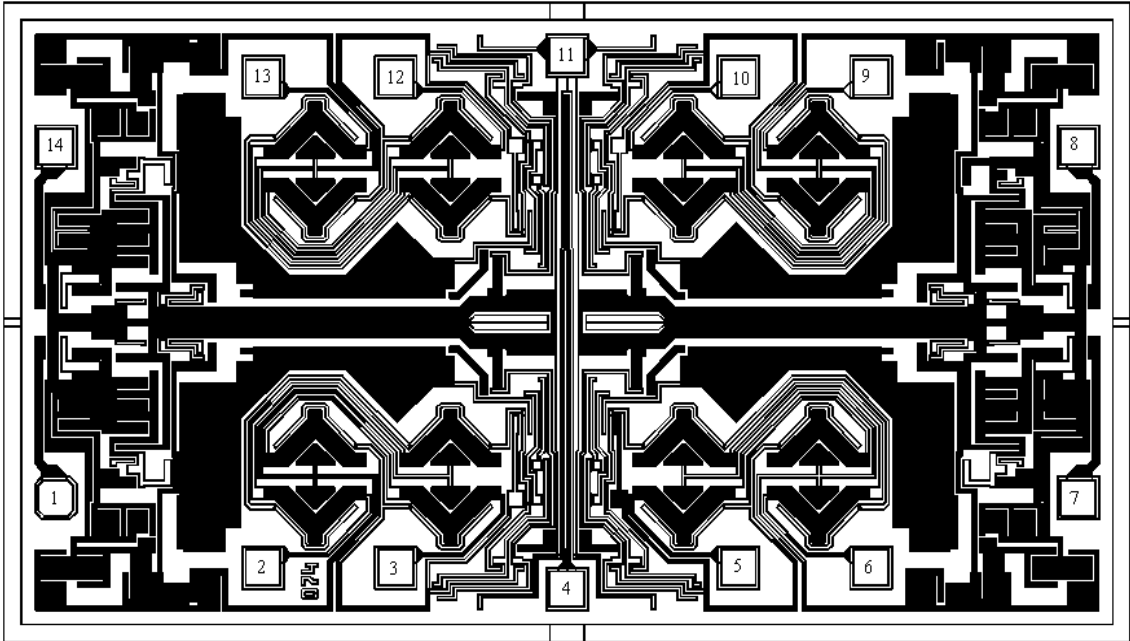
Electrical Characteristics

$V_{CC} = \pm 15V$, $T_{AMB} = 25^{\circ}C$ (unless otherwise specified)

Symbol	Parameters	Min	Typ	Max	Units
V_{IO}	Input Offset Voltage ($R_S = 50\Omega$, $V_O = 0$) $T_{amb} = 25^{\circ}C$ $T_{min.} \leq T_{amb.} \leq T_{max.}$		3	10 13	mV
DV_{IO}	Input Offset Voltage Drift		18		$\mu V/^{\circ}C$
I_{IO}	Input Offset Current* $T_{amb} = 25^{\circ}C$ $T_{min.} \leq T_{amb.} \leq T_{max.}$		5	100 10	pA nA
I_{IB}	Input Bias Current* $T_{amb} = 25^{\circ}C$ $T_{min.} \leq T_{amb.} \leq T_{max.}$		65	400 20	pA nA
A_{VD}	Large Signal Voltage Gain ($R_L = 2k\Omega$, $V_O = \pm 10V$) $T_{amb} = 25^{\circ}C$ $T_{min.} \leq T_{amb.} \leq T_{max.}$	25 15	200		V/mV
SVR	Supply Voltage Rejection Ratio ($R_S = 50\Omega$, $V_O = 0$) $T_{amb} = 25^{\circ}C$ $T_{min.} \leq T_{amb.} \leq T_{max.}$	70 70	86		dB
I_{CC}	Supply Current (Per Amplifier) $T_{amb} = 25^{\circ}C$ $T_{min.} \leq T_{amb.} \leq T_{max.}$		1.4	2.5 2.5	mA
V_{ICM}	Input Common Mode Voltage Range	± 11	+15 -12		V
CMR	Common Mode Rejection Ratio ($R_S = 50\Omega$, $V_O = 0$) $T_{amb} = 25^{\circ}C$	70	86		dB
$\pm V_{OPP}$	Output Voltage Swing $T_{amb} = 25^{\circ}C$ $T_{min.} \leq T_{amb.} \leq T_{max.}$ $R_L = 2k\Omega$ $R_L = 10k\Omega$ $R_L = 2k\Omega$ $R_L = 10k\Omega$	10 12 10 12	12 13.5		V
SR	Slew Rate ($V_i = 10V$, $R_L = 2k\Omega$, $C_L = 100pF$, $T_{amb} = 25^{\circ}C$, unity gain)	8	13		V/ μs
t_r	Rise Time ($V_i = 20mV$, $R_L = 2k\Omega$, $C_L = 100pF$, $T_{amb} = 25^{\circ}C$, unity gain)		0.1		μs
K_{OV}	Overshoot ($V_i = 20mV$, $R_L = 2k\Omega$, $C_L = 100pF$, $T_{amb} = 25^{\circ}C$, unity gain)		20		%
GBP	Gain Bandwidth Product		3		MHz
R_i	Input Resistance		10^{12}		Ω
THD	Total Harmonic Distortion ($f = 1kHz$, $R_L = 2k\Omega$, $T_{amb} = 25^{\circ}C$)		0.01		%
e_n	Equivalent input Noise Voltage ($R_S = 100\Omega$, $f = 1KHz$)		18		$\frac{nV}{\sqrt{Hz}}$
V_{O1}/V_{O2}	Channel Separation ($A_V = 100$)		120		dB

* The Input bias currents are junction leakage currents which approximately double for every $10^{\circ}C$ increase in the junction temperature.

Pad location MIK084C



Ship size 3.25 x 1.8 mm

Pad Location Coordinates

Pad	Pad Name	Coordinates μm	
		X	Y
1	Output 1	150	406
2	Inverting input 1	748	210
3	Non-inverting input 1	1131	210
4	V_{CC+}	1625	150
5	Non-inverting input 2	2119	210
6	Inverting input 2	2502	210
7	Output 2	3100	406
8	Output 3	3100	1394
9	Inverting input 3	2502	1590
10	Non-inverting input 3	2119	1590
11	V_{CC-}	1625	1650
12	Non-inverting input 4	1131	1590
13	Inverting input 4	748	1590
14	Output 4	150	1394

Note: Contact Pad#1 has chamfered corners.