芯伯乐®
XINBOLE

Product Specification

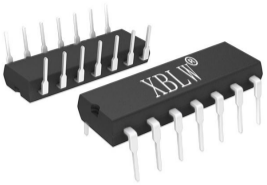
XBLW TL074

Low-Noise JFET Quad Operational Amplifier

WEB | www.xinboleic.com

Descriptions

Consisted of high voltage J-FET and bipolar transistors, the TL074 is a high speed J-FET input quad- channel operational amplifier, featured with high slew rate,low input offset and bias current and low offset voltage temperature rate.



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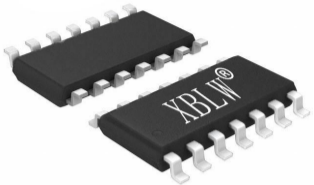

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Feature

- Applied Advanced BiMOS Technology
- Wide Common-Mode And Differential Voltage Ranges
- Low Input Bias And Offset Currents
- Output Short-Circuit Protection
- High Input Impedance
- Internal Frequency Compensation
- Latch-up-free operation
- High Slew Rate: 16V/us

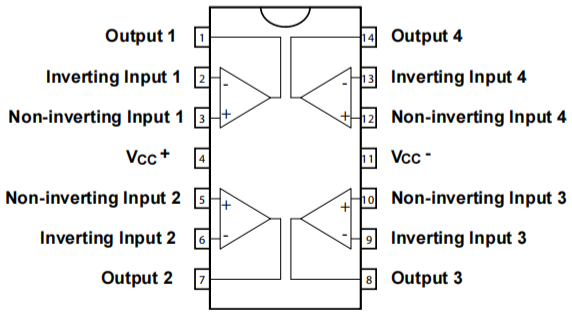
Applications

- Battery test equipment
- Pro audio mixers
- Single phase online UPS
- Solar energy: string and central inverter
- Three phase UPS
- Motor drives: AC and servo drive control and power stage modules

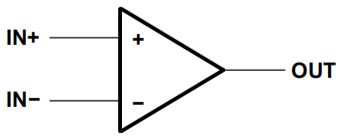
Ordering Information

Product Model	Package Type	Marking	Packing	Packing Qty
XBLW TL074CN	DIP-14	TL074CN	Tube	1000pcs/Box
XBLW TL074CDTR	SOP-14	TL074C	Tape	2500pcs/Reel

Pins Diagram



Symbol



Absolute Maximum Ratings

(Tamp=25℃, Unless otherwise specified)

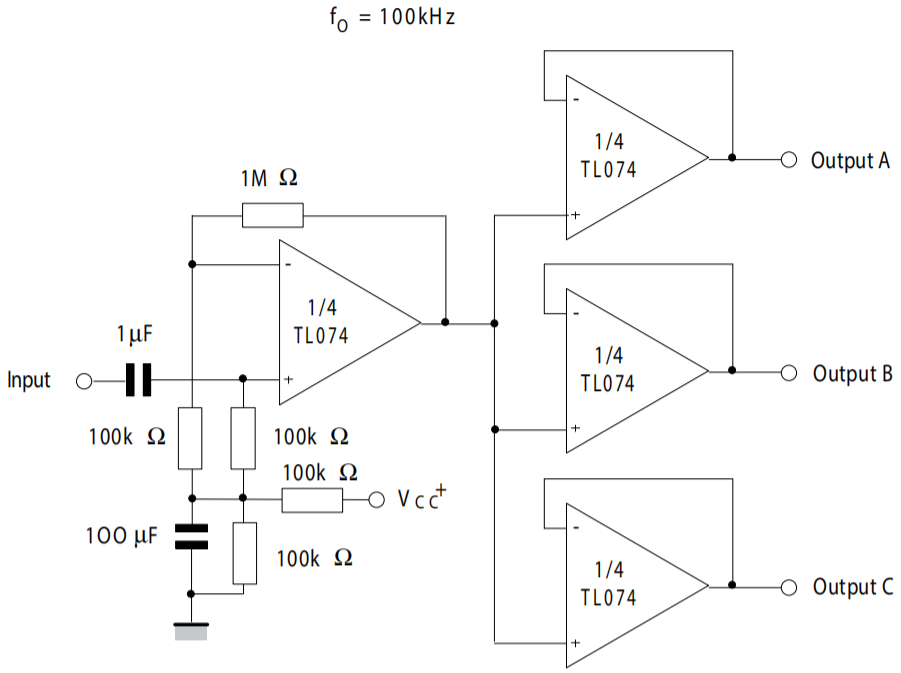
Symbol	Description	Parameter	Unit
V_{CC}	Supply Voltage	±18	V
V_i	Input Voltage	±15	V
V_{id}	Differential Input Voltage	±30	V
P_{tot}	Power Dissipation	680	mW
T_{oper}	Operating Temperature Range	0~70	℃
T_{stg}	Storage Temperature Range	-65~150	℃

Electrical Parameter Characteristics

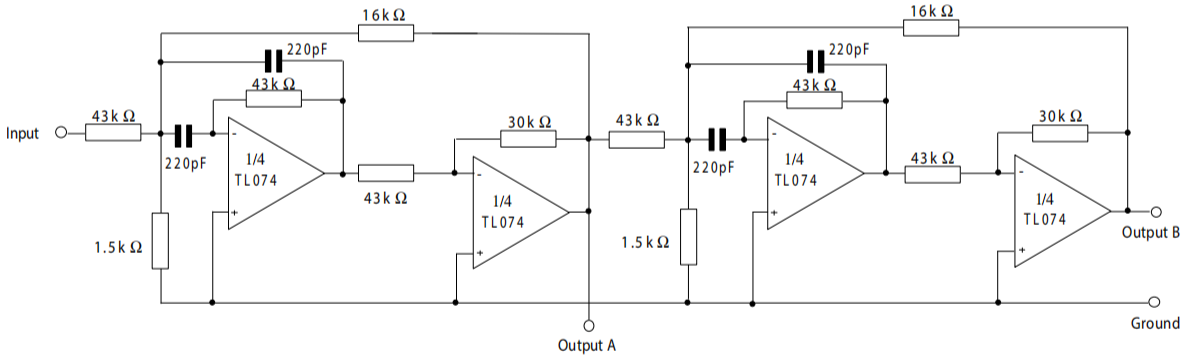
(Vcc=±15, Tamp=25℃, Unless otherwise specified)

Symbol	Description	Parameter			Unit
		Min.	Typ.	Max.	
V_{IO}	Input Offset Voltage (Rs=5 Ω)		3	15	mV
I_{IO}	Input Offset Current			4	pA
I_{ib}	Input Bias Current			20	nA
A_{VD}	Large-signal differential voltage amplification (R_L = 2 kΩ, Vo = ±10 V)		25		V/mV
SVR	Supply Voltage Rejection Ratio (Rs=50Ω)	65	75		dB
I_{CC}	Static Supply Current(single amplifier)		1.4	25	mA
V_{icm}	Input Common Mode Voltage Range		±11	+15 -12	V
CMR	Common Mode Rejection Ratio(Rs=50Ω)	65	75		dB
I_{OS}	Output Short Circuit Current	10	50	60	mA
$\pm V_{OPP}$	Output voltage swing R_L=2KΩ R_L=10KΩ	10 12	12 13.5		V
SR	Slew Rate (V_{in}=10V, R_L=2KΩ, C_L=100pF)	8	16		V/us
t_R	Rise time (Vin=200mV, RL=2KΩ, C_L=100pF)		0.1		us
GBP	Gain Bandwidth Product (f=100kHz, Vin=10mV, RL=2KΩ, CL=100pF)	2.5	4		MHz

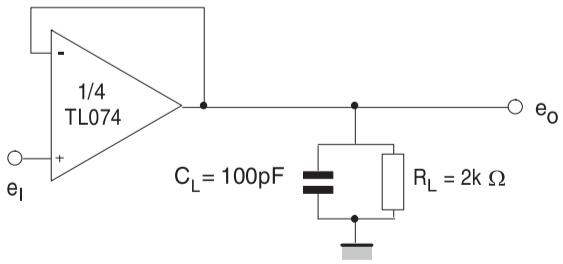
Typical Application



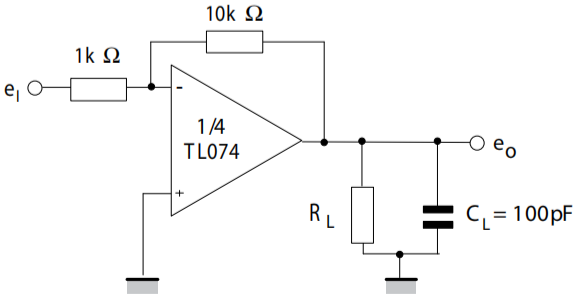
Audio distribution amplifier



Positive feeback bandpass filter



Voltage followe



Gain-of-10 inverting amplifier

Package Information

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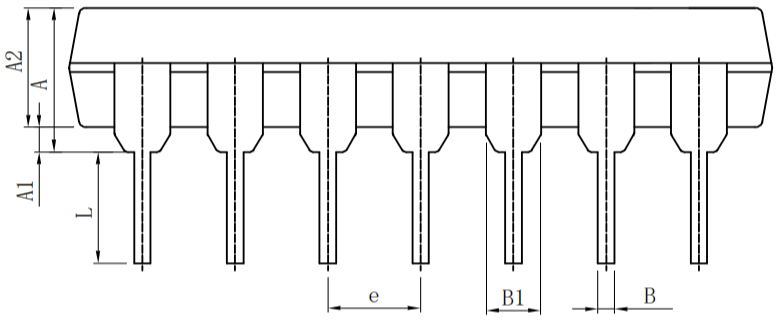
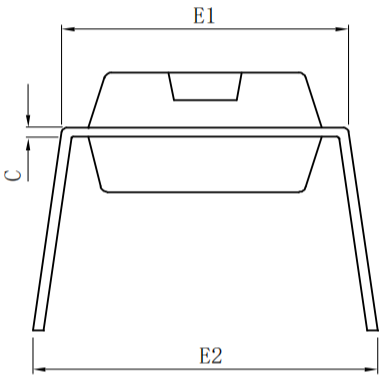
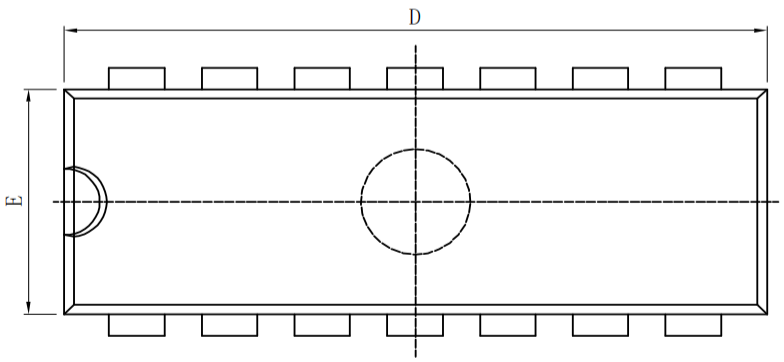
Size / Symbol	Dimensions In Millimeters		Size / Symbol	Dimensions In Inches	
	Min(mm)	Max(mm)		Min(in)	Max(in)
A	3.710	4.310	A	0.146	0.170
A1	0.510		A1	0.020	
A2	3.200	3.600	A2	0.126	0.142
B	0.380	0.570	B	0.015	0.022
B1	1.524(BSC)		B1	0.060(BSC)	
C	0.204	0.360	C	0.008	0.014
D	18.800	19.200	D	0.740	0.756
E	6.200	6.600	E	0.244	0.260
E1	7.320	7.920	E1	0.288	0.312
e	2.540(BSC)		e	0.100(BSC)	
L	3.000	3.600	L	0.118	0.142
E2	8.400	9.000	E2	0.331	0.354







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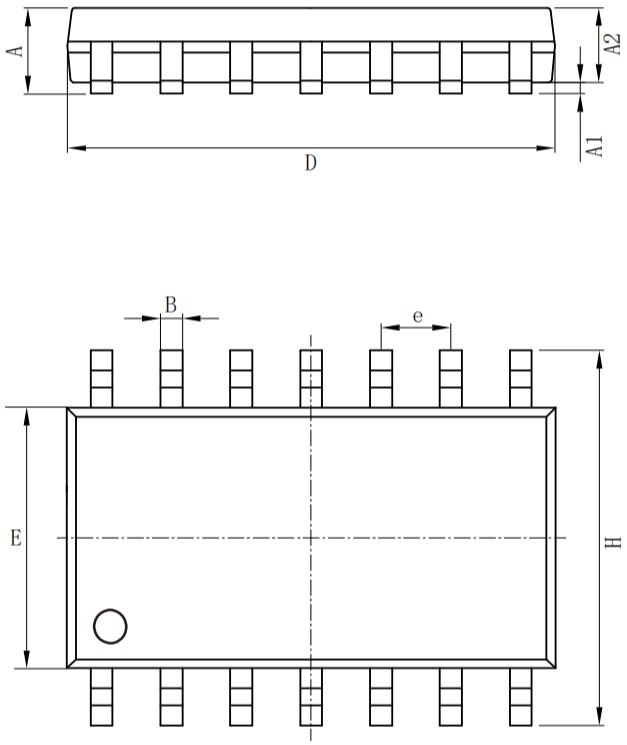
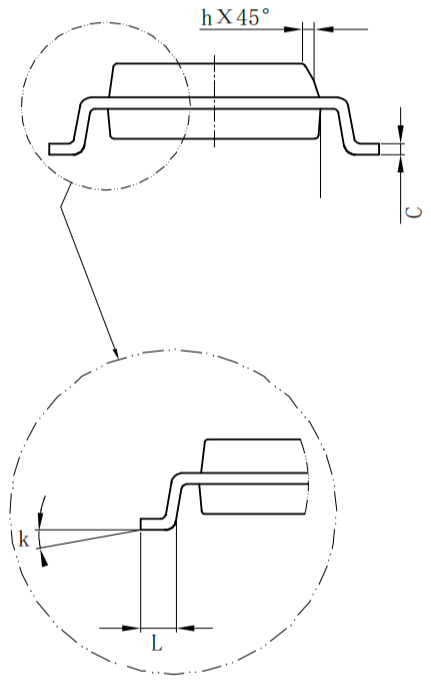
Size / Symbol	Dimensions In Millimeters		Size / Symbol	Dimensions In Inches	
	Min(mm)	Max(mm)		Min(in)	Max(in)
A	1.350	1.750	A	0.050	0.068
A1	0.100	0.250	A1	0.004	0.009
A2	1.100	1.650	A2	0.040	0.060
B	0.330	0.510	B	0.010	0.020
C	0.190	0.250	C	0.007	0.009
D	8.550	8.750	D	0.330	0.340
E	3.800	4.000	E	0.150	0.150
e	1.27		e	0.05	
H	5.800	6.200	H	0.220	0.240
h	0.250	0.500	h	0.009	0.020
L	0.400	1.270	L	0.015	0.050
k	8° (max)		k	8° (max)	





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