

芯伯乐®  
X I N B O L E

# Product Specification

XBLW TL072

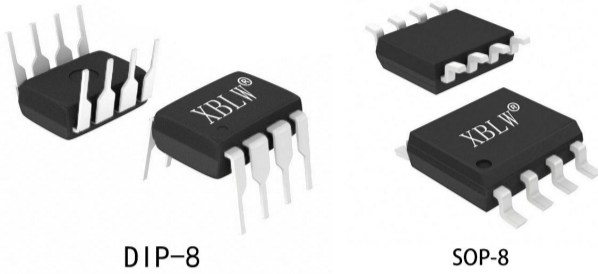
Low Noise JFET Dual Operational Amplifier

WEB | [www.xinboleic.com](http://www.xinboleic.com)



## Descriptions

Consisted of high voltage J-FET and bipolar transistors, the TL072 is a high speed J-FET dual- channel operational amplifier, featured with high slew rate, low input offset and bias current and low offset voltage temperature rate. The TL072 provides DIP8 and SOP8 package forms.



## Feature

- Lower Power Consumption
- Wide Common-Mode And Differential Voltage Ranges
- Low Input Bias And Offset Currents
- Output Short-Circuit Protection
- High Input Impedance
- High Slew Rate
- High Gain-Bandwidth up to 4MHz

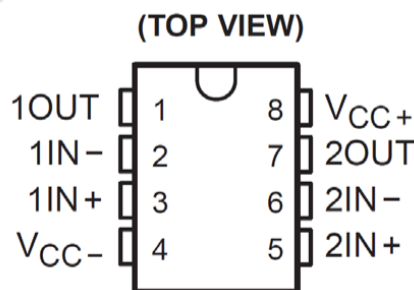
## Applications

- 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

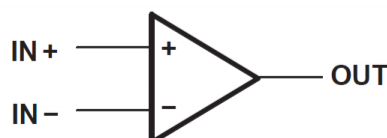
## Ordering Information

Product Model	Package Type	Marking	Packing	Packing Qty
XBLW TL072CN	DIP-8	TL072CN	Tube	2000pcs/Box
XBLW TL072CDTR	SOP-8	TL072C	Tape	2500pcs/Reel

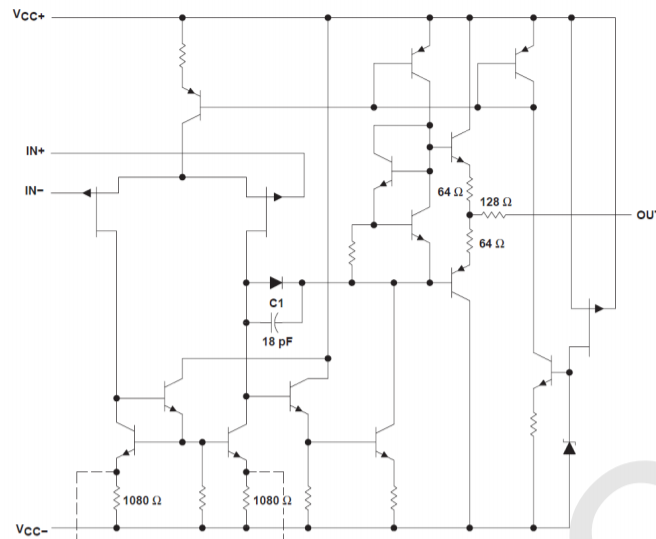
## Pins Diagram



## Symbol



## Internal Diagram



## Absolute Maximum Ratings

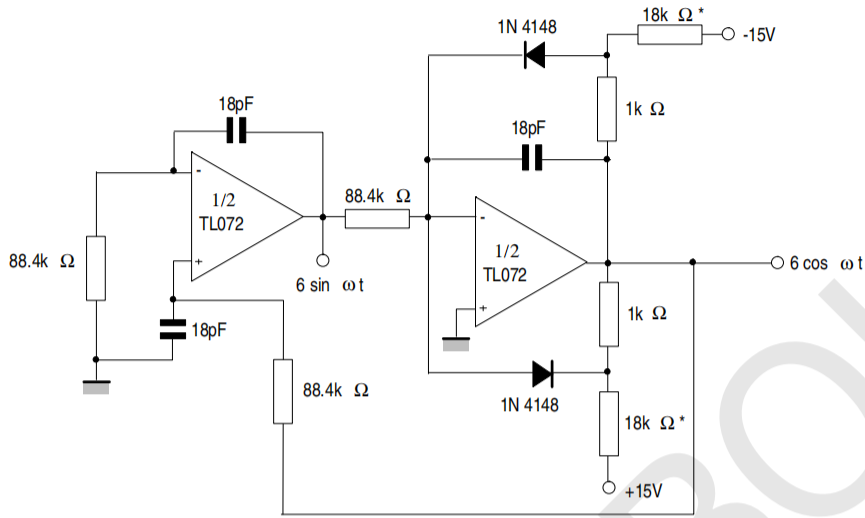
Symbol	Description	Parameter	Unit
$V_{CC}$	Supply Voltage	$\pm 18$	V
$V_i$	Input Voltage	$\pm 14$	V
$V_{id}$	Differential Input Voltage	$\pm 28$	V
$T_{oper}$	Operating Temperature Range	0~70	°C
$T_{stg}$	Storage Temperature Range	-65~+150	°C

## Electrical Parameter Characteristics

( $V_{CC}=\pm 15$ ,  $T_{amp}=25^\circ\text{C}$ , Unless otherwise specified)

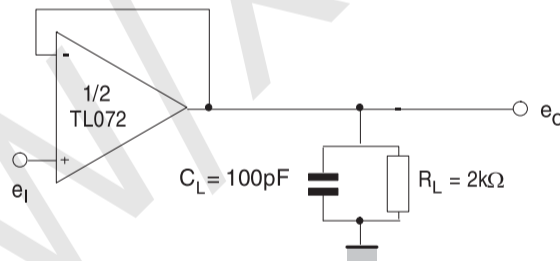
Symbol	Parameter Name	Test Conditions	Parameter			Unit
			Min.	Typ.	Max.	
$V_{IO}$	Input Offset Voltage	$V_o=0V$		3	10	mV
$I_o$	Input Offset Current	$V_o=0V$			1.5	pA
$I_{ib}$	Input Bias Current	$V_o=0V$			2.5	nA
$V_{icr}$	Input Common Mode Voltage Range		-12	$\pm 11$	15	V
$V_{OM}$	Maximum Peak Output Voltage Swing	$R_L = 10\text{ k}\Omega$ $R_L \geq 2\text{ k}\Omega$	$\pm 12$ $\pm 10$	$\pm 13.5$ $\pm 12.5$		V
$A_{VD}$	Large-signal differential voltage amplification	$R_L \geq 2\text{ k}\Omega$ , $V_o = \pm 10\text{ V}$	80	95		dB
GB	Gain Bandwidth			3		MHz
CMRR	Common Mode Rejection Ratio		70	85		dB
kSVR	Supply Voltage Rejection Ratio	$V_{CC} = \pm 15\text{ V to } \pm 9\text{ V}$ , $V_o=0V$	70	86		dB
$I_{CC}$	Static Supply Current (each amplifier)			1.4	2.8	mA
SR	Slew Rate	$V_i = 10\text{ V}$	8	13		V/us
$t_R$	Rise time			0.05		us

Typical Application (One Amplifier)

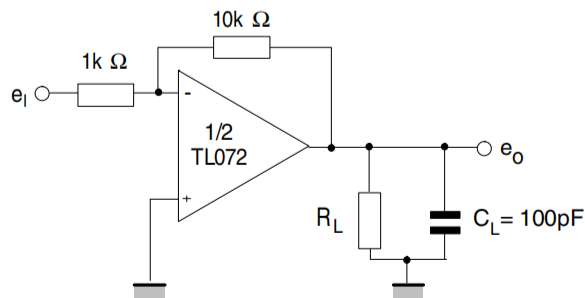


1. These resistor values may be adjusted for a symmetrical output.

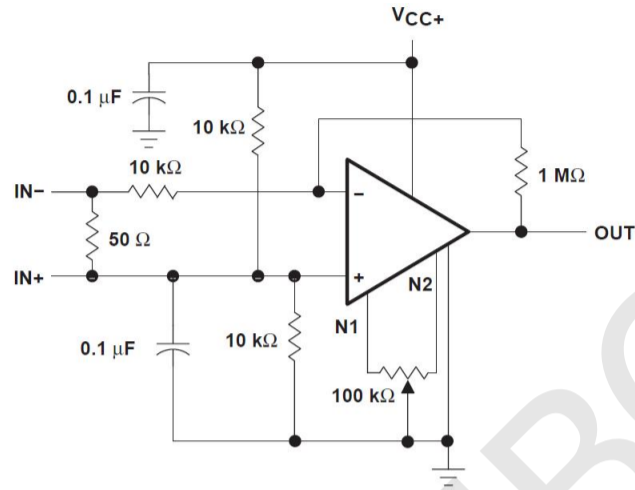
100kHz quadruple oscillator



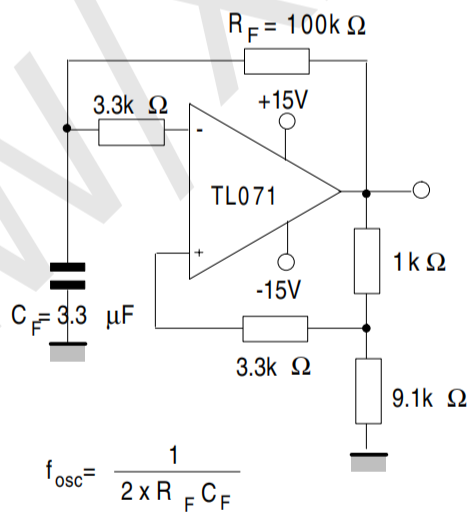
Voltage follower



Gain-of-10 inverting amplifier



AC amplifier

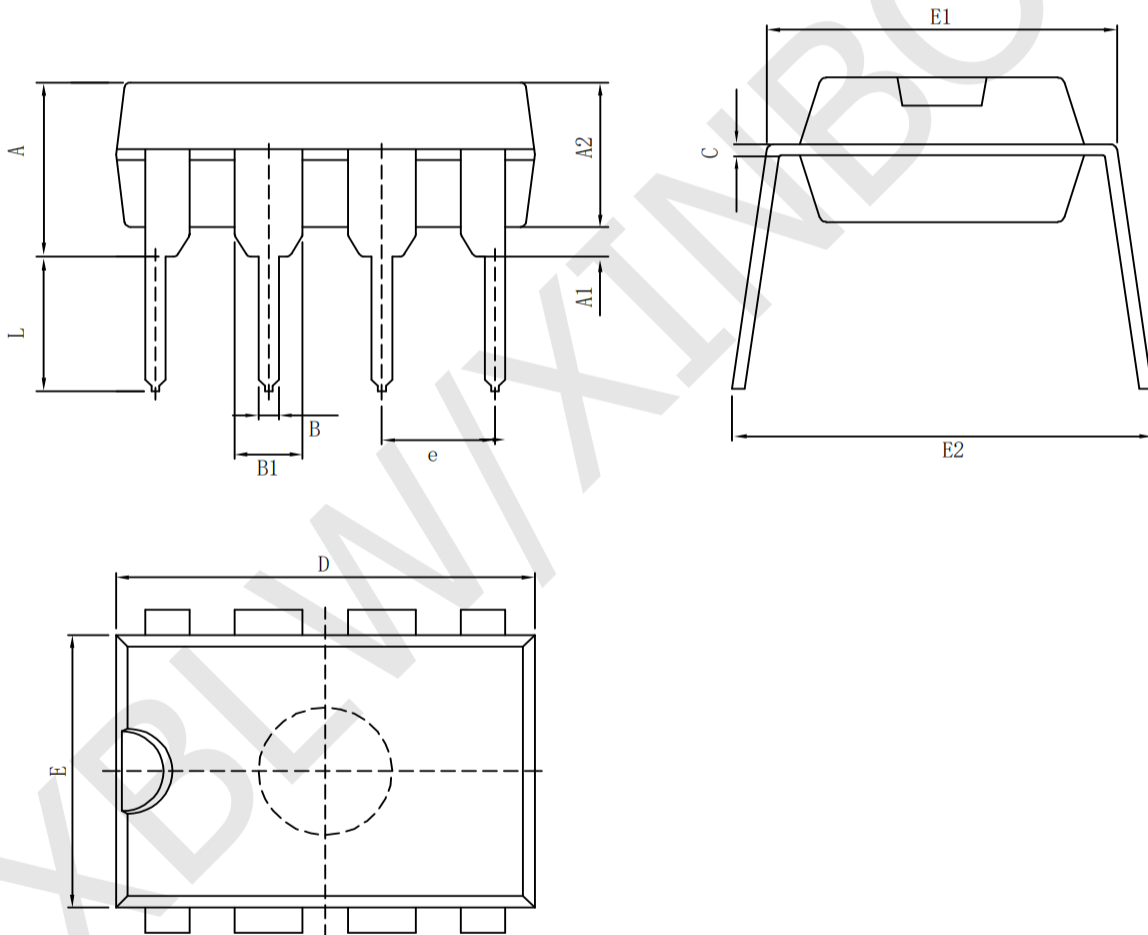


(0.5Hz) Square wave oscillator

Package Information

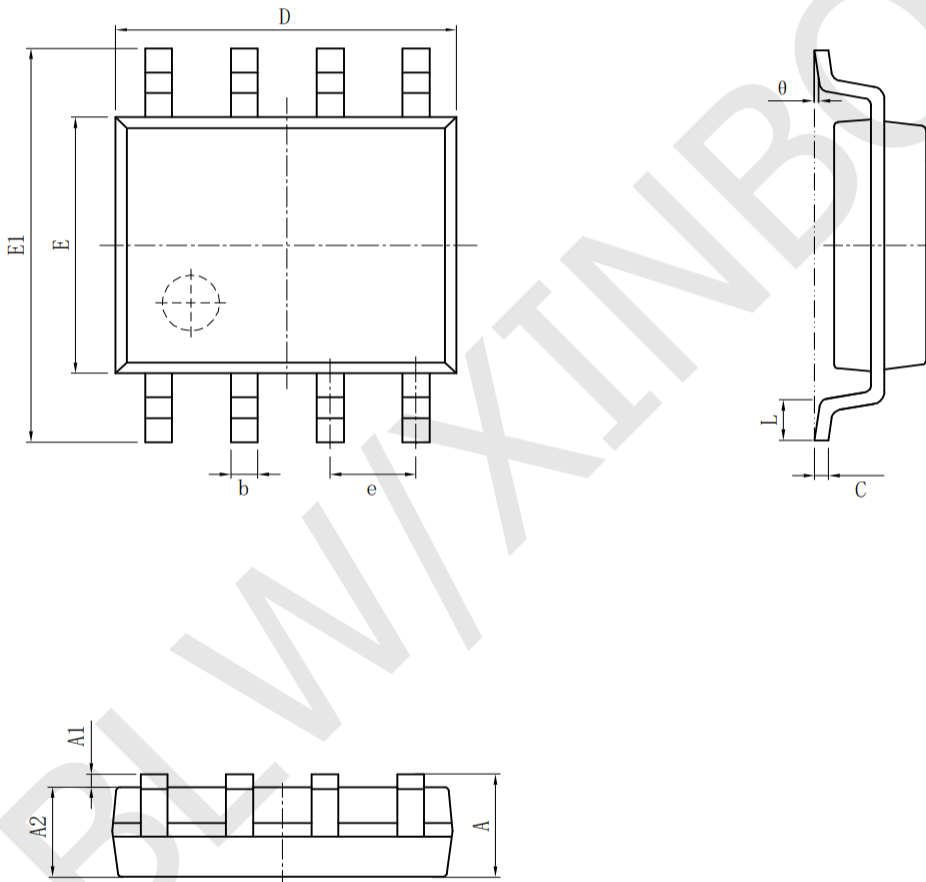
- DIP-8

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	9.000	9.400	D	0.354	0.370
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



• SOP-8

Symbol	Dimensions In Millimeters		Symbol	Dimensions In Inches	
	Min (mm)	Max (mm)		Min (in)	Max (in)
A	1.350	1.750	A	0.053	0.069
A1	0.100	0.250	A1	0.004	0.010
A2	1.350	1.550	A2	0.053	0.061
b	0.330	0.510	b	0.013	0.020
c	0.170	0.250	c	0.006	0.010
D	4.700	5.100	D	0.185	0.200
E	3.800	4.000	E	0.150	0.157
E1	5.800	6.200	E1	0.228	0.224
e	1.270 (BSC)		e	0.050 (BSC)	
L	0.400	1.270	L	0.016	0.050
θ	0°	8°	θ	0°	8°



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