Descriptions

Consisted of high voltage J-FET and bipolar transistors, the TL064IDR 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.

Feature

- 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

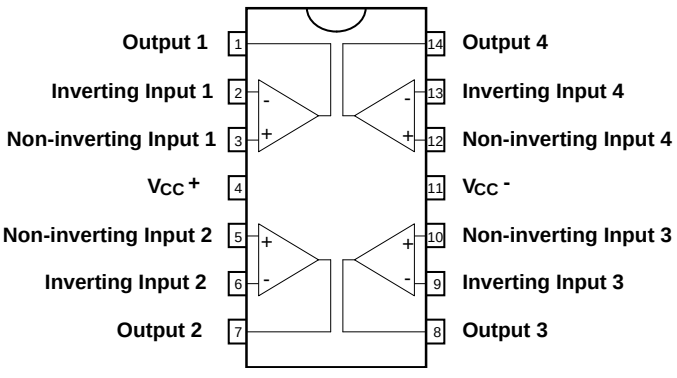
Applications

- 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

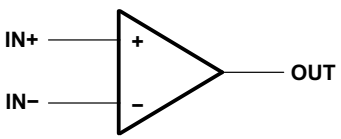
Ordering Information

Product Model	Package Type	Packing	Packing Qty
TL064IDR	SOP-14(SOIC-14)	Tape	2500Pcs/Reel

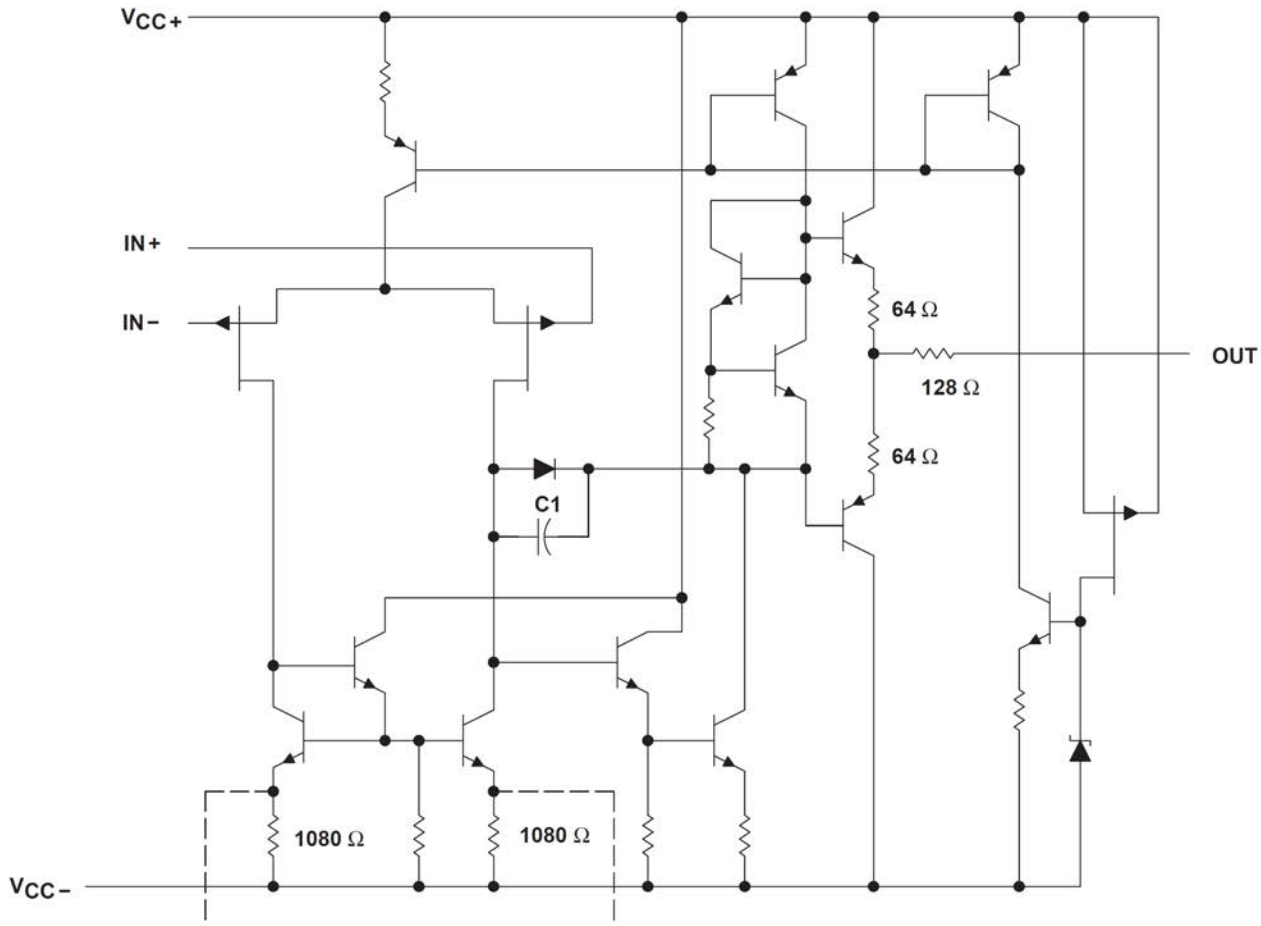
Pins Diagram



Symbol



Schematic(Each Amplifier)



Absolute Maximum Ratings

(Tamp=25℃ , Unless otherwise specified)

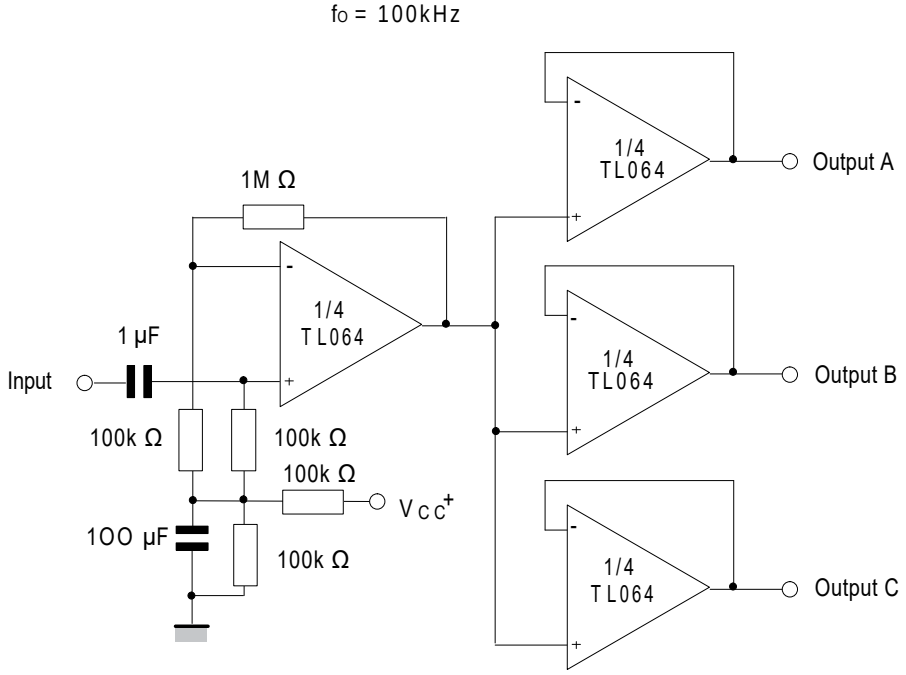
Symbol	Description	Parameter	Unit
V_{CC}	Supply Voltage	±18	V
V_i	Input Voltage	±15	V
V_{id}	Differential Input Voltage	±30	V
P_{tot}	Power Dissipation	680	mW
T_{oper}	Operating Temperature Range	0~70	℃
T_{stg}	Storage Temperature Range	-65~150	℃

Electrical Parameter Characteristics

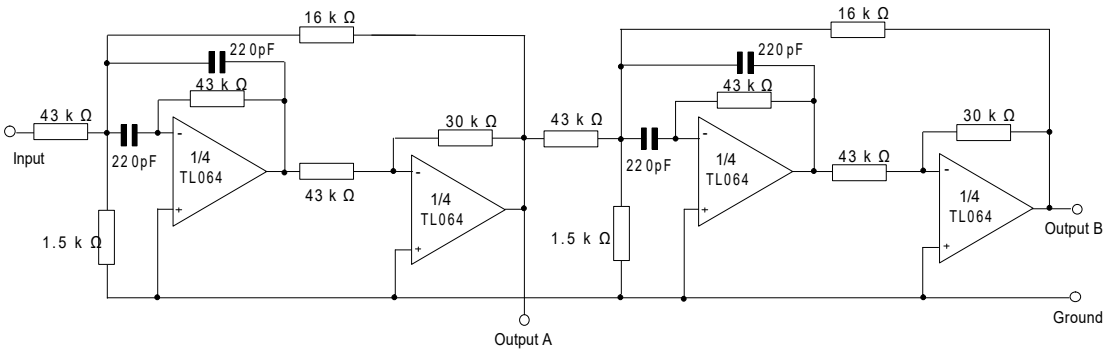
(Vcc=±15，Tamp=25°C, Unless otherwise specified)

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	2.5	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，CL=100pF)		0.1		us
GBP	Gain Bandwidth Product (f=100kHz ， Vin=10mV ，RL=2KΩ ， C_L=100pF)	2.5	4		MHz

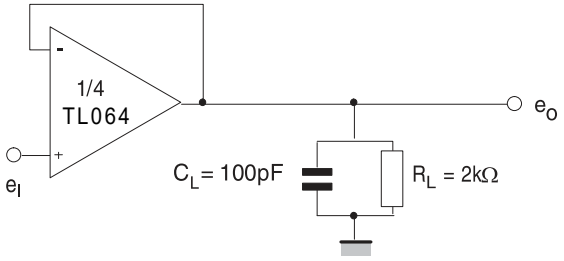
Typical Application



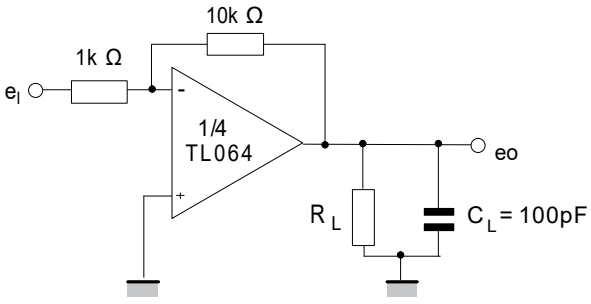
Audio distribution amplifier



Positive feeback bandpass filter



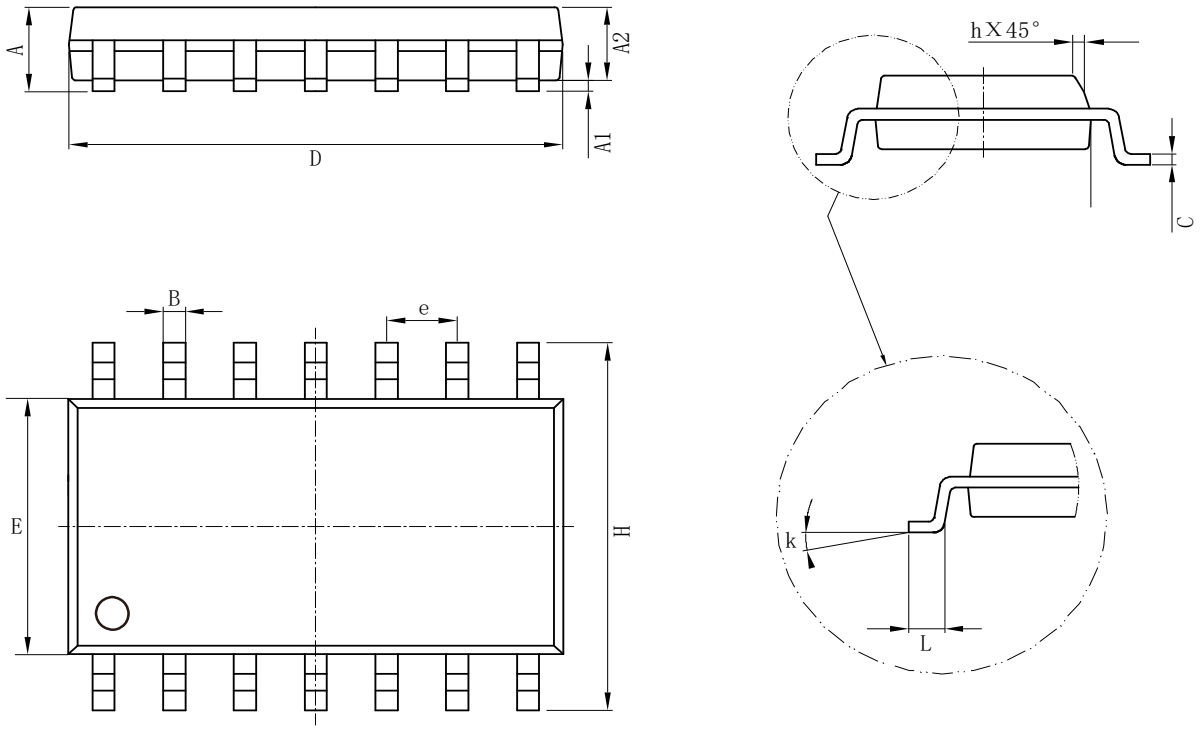
Voltage followe



Gain-of-10 inverting amplifier

Package Information

SOP-14(SOIC-14)



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)	

Attention

■ Any and all HUA XUAN YANG ELECTRONICS products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with your HUA XUAN YANG ELECTRONICS representative nearest you before using any HUA XUAN YANG ELECTRONICS products described or contained herein in such applications.

■ HUA XUAN YANG ELECTRONICS assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all HUA XUAN YANG ELECTRONICS products described or contained herein.

■ Specifications of any and all HUA XUAN YANG ELECTRONICS products described or contained herein stipulate the performance, characteristics, and functions of the described products in the independent state, and are not guarantees of the performance, characteristics, and functions of the described products as mounted in the customer's products or equipment. To verify symptoms and states that cannot be evaluated in an independent device, the customer should always evaluate and test devices mounted in the customer's products or equipment.

■ HUA XUAN YANG ELECTRONICS CO.,LTD. strives to supply high-quality high-reliability products. However, any and all semiconductor products fail with some probability. It is possible that these probabilistic failures could
give rise to accidents or events that could endanger human lives, that could give rise to smoke or fire, or that could cause damage to other property. When designing equipment, adopt safety measures so that these kinds of accidents or events cannot occur. Such measures include but are not limited to protective circuits and error prevention circuits for safe design, redundant design, and structural design.

■ In the event that any or all HUA XUAN YANG ELECTRONICS products(including technical data, services) described or contained herein are controlled under any of applicable local export control laws and regulations, such products must not be exported without obtaining the export license from the authorities concerned in accordance with the above law.

■ No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or any information storage or retrieval system, or otherwise, without the prior written permission of HUA XUAN YANG ELECTRONICS CO.,LTD.

■ Information (including circuit diagrams and circuit parameters) herein is for example only ; it is not guaranteed for volume production. HUA XUAN YANG ELECTRONICS believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.

■ Any and all information described or contained herein are subject to change without notice due to product/technology improvement, etc. When designing equipment, refer to the "Delivery Specification" for the HUA XUAN YANG ELECTRONICS product that you intend to use.