

Summary

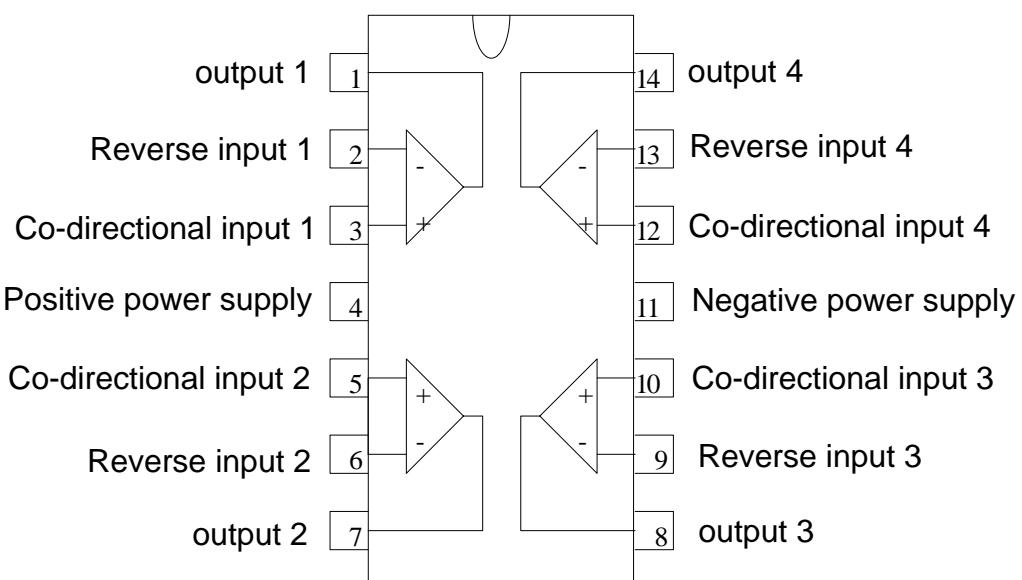
TL084 is a high-speed operational amplifier with four J-FET inputs, which consists of high-voltage J-FET and bipolar transistor.

It has high conversion rate, low input bias current and offset current, and low offset voltage temperature coefficient.

Main feature

- Wide common-mode and differential-mode input voltage range
- Low input bias current and offset current
- Output short-circuit current protection
- High input impedance
- Internal frequency compensation
- Self-latching station
- High conversion rate: 16V/us

Pin description



General J-FET quad operational amplifier

Limit parameter (absolute maximum rating, unless otherwise specified, Tamb=25°C)

symbol	describe	limit value	unit
Vcc	Power supply voltage	±18	V
Vi	input voltage	±15	V
Vid	Differential mode input voltage	±30	V
Ptot	power consumption	680	mW
Toper	Working temperature	-40~85	°C
Tstg	Storage temperature	-65~150	°C

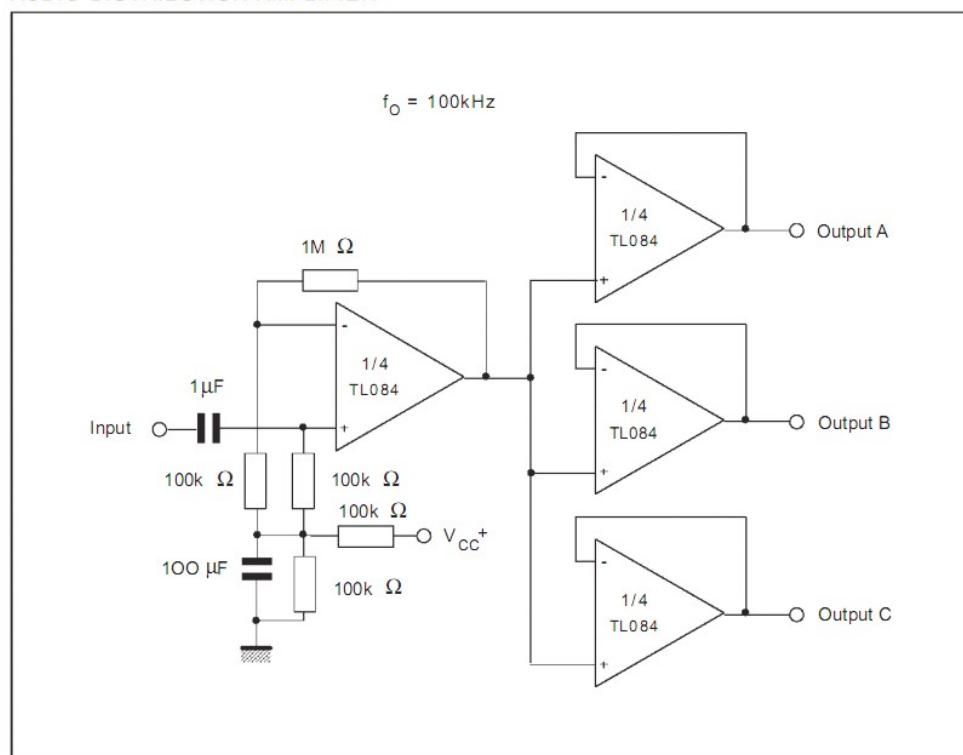
Electrical characteristics (VCC = 15V, Tamp = 25°C shall be specified separately)

symbol	describe	numerical value			unit
		minimum value	typical value	maximum	
Vio	Input offset voltage (Rs=5Ω)		3	13	mV
lio	Input offset current			4	nA
Iib	Output bias current			20	nA
Avd	Large signal voltage gain RL= 2kΩ, VO = ±10v		25		V/mV
SVR	Powersupply voltage rejection ratio (Rs=50Ω)	65	75		dB
Icc	Single-channel operational amplifier static current		1.4	2.5	mA
Vicm	Input common-mode voltage swing		±11	+15 -12	V
CMR	Common mode rejection ratio (Rs=50Ω)	65	75		dB
Ios	Output short- circuit current	10	50	60	mA
±Vopp	Output voltage swing: RL= 2k Ω RL = 10k Ω	10 12	12 13.5		V
SR	Conversion rate (Vin = 10v, RL=2kΩ, CL = 100pf)	8	16		V/us
tr	Delay time Vin = 200mV, RL = 2kΩ, CL= 100pF.		0.1		us
GBP	Gain bandwidth product (f=100kHz, Vin=10mV RL=2KΩ CL=100pF	2.5	4		MHz

General J-FET quad operational amplifier

Typical application diagram

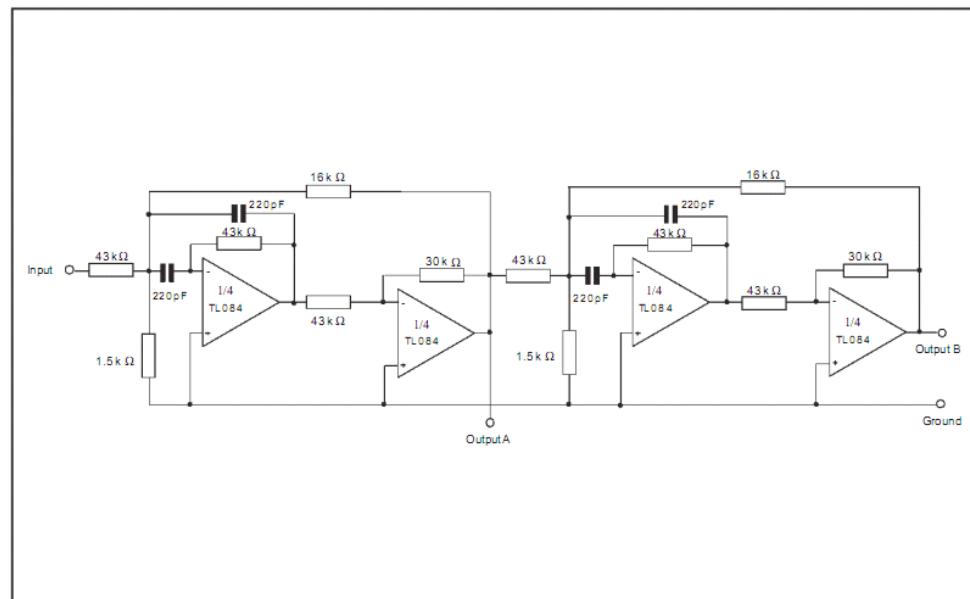
AUDIO DISTRIBUTION AMPLIFIER



Application of Audio Distribution Amplifier

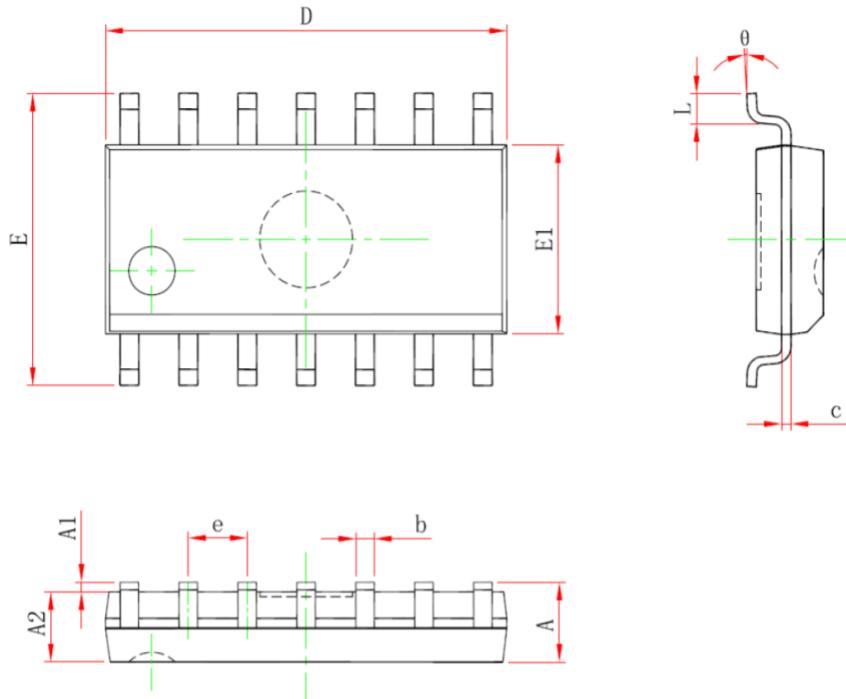
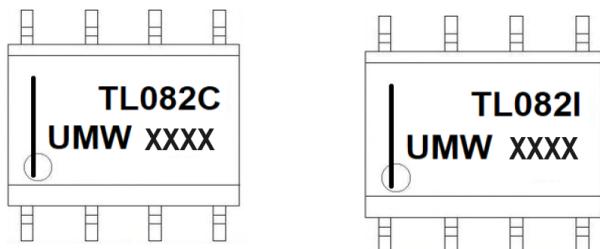
Application of active feedback filter

POSITIVE FEEDBACK BANDPASS FILTER



PACKAGE OUTLINE DIMENSIONS

SOP14

**Marking****Ordering information**

Order code	Package	Baseqty	Deliverymode
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UMW TL084IDR	SOP-14	2500	Tape and reel

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