

## TL08xx JFET-Input Operational Amplifiers

### 1 Features

- Low Power Consumption: 1.4 mA/ch Typical
- Wide Common-Mode and Differential Voltage Ranges
- Low Input Bias Current: 30 pA Typical
- Low Input Offset Current: 5 pA Typical
- Output Short-Circuit Protection
- Low Total Harmonic Distortion: 0.003% Typical
- High Input Impedance: JFET Input Stage
- Latch-Up-Free Operation
- High Slew Rate: 13 V/ $\mu$ s Typical
- Common-Mode Input Voltage Range Includes  $V_{CC+}$

### 2 Applications

- Tablets
- White goods
- Personal electronics
- Computers

### 3 Description

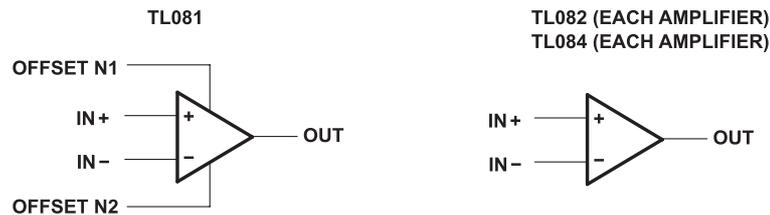
The TL08xx JFET-input operational amplifier family is designed to offer a wider selection than any previously developed operational amplifier family. Each of these JFET-input operational amplifiers incorporates well-matched, high-voltage JFET and bipolar transistors in a monolithic integrated circuit. The devices feature high slew rates, low input bias and offset currents, and low offset-voltage temperature coefficient.

#### Device Information<sup>(1)</sup>

PART NUMBER	PACKAGE	BODY SIZE (NOM)
TL084xD	SOIC (14)	8.65 mm × 3.91 mm
TL08xxFK	LCCC (20)	8.89 mm × 8.89 mm
TL084xJ	CDIP (14)	19.56 mm × 6.92 mm
TL084xN	PDIP (14)	19.3 mm × 6.35 mm
TL084xNS	SO (14)	10.3 mm × 5.3 mm
TL084xPW	TSSOP (14)	5.0 mm × 4.4 mm

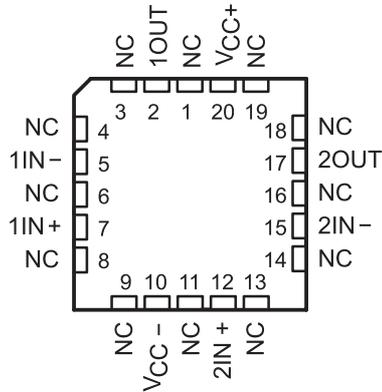
(1) For all available packages, see the orderable addendum at the end of the data sheet.

#### Schematic Symbol

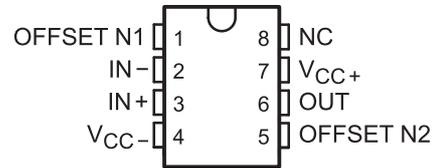


## 5 Pin Configuration and Functions

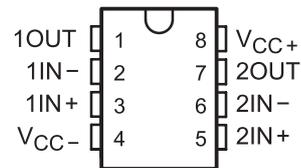
**TL082 FK Package  
20-Pin LCCC  
Top View**



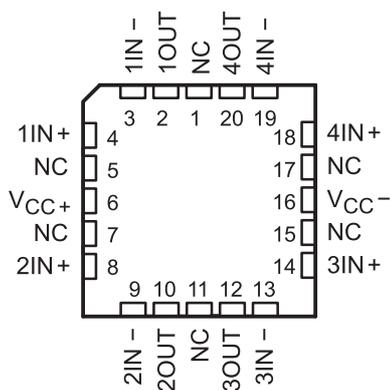
**TL081 and TL081x D, P, and PS Package  
8-Pin SOIC, PDIP, and SO  
Top View**



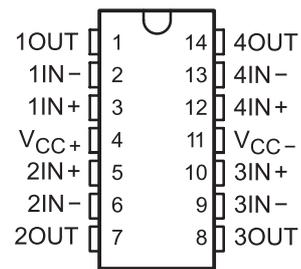
**TL082 and TL082x D, JG, P, PS and PW Package  
8-Pin SOIC, CDIP, PDIP, SO, and TSSOP  
Top View**



**TL084 FK Package  
20-Pin LCCC  
Top View**



**TL084 and TL084x D, J, N, NS and PW Package  
14-Pin SOIC, CDIP, PDIP, SO, and TSSOP  
Top View**



### Pin Functions

NAME	PIN					I/O	DESCRIPTION
	TL081	TL082		TL084			
	SOIC, PDIP, SO	SOIC, CDIP, PDIP, SO, TSSOP	LCCC	SOIC, CDIP, PDIP, SO, TSSOP	LCCC		
1IN-	—	2	5	2	3	I	Negative input
1IN+	—	3	7	3	4	I	Positive input
1OUT	—	1	2	1	2	O	Output
2IN-	—	6	15	6	9	I	Negative input
2IN+	—	5	12	5	8	I	Positive input
2OUT	—	7	17	7	10	O	Output
3IN-	—	—	—	9	13	I	Negative input
3IN+	—	—	—	10	14	I	Positive input
3OUT	—	—	—	8	12	O	Output
4IN-	—	—	—	13	19	I	Negative input
4IN+	—	—	—	12	18	I	Positive input
4OUT	—	—	—	14	20	O	Output