

## 高级 LinCMOS™ 轨到轨低功耗运算放大器

### 特性

- 输出摆幅包括两个电源轨
- 低噪声
- 低输入偏置电流
- 技术规格针对单电源及分离电源操作全面拟订
- 极低功耗
- 共模输入电压范围包括负电源轨
- 低输入偏移电压
- 包含宏观模型

### 说明

TLC2252 是一款由德州仪器 (TI) 生产的双通道和四通道运算放大器。此器件针对单电源或分离电源应用中增加的动态范围表现出了轨到轨输出性能。微功耗运行使得此器件成为电池供电类应用的理想选择。与之前 CMOS 放大器相比，噪声性能已经大大提升。

表现出高输入阻抗和低噪声的 TLC2252 放大器在针对高阻抗源的小信号调节方面表现出色，例如压电传感器。由于微功耗耗散级别，这个器件在手持监控和遥感应用中运转良好。此外，单电源或分离电源的轨到轨输出特性使得此器件成为与模数转换器 (ADC) 对接时的理想选择。

### ORDERING INFORMATION<sup>(1)</sup>

PRODUCT	PACKAGE DESIGNATOR	PACKAGE	ORDERABLE PART NUMBER	PACKAGE QUANTITY
TLC2252	TD	Bare die in wafer pack <sup>(2)</sup>	TLC2252TDA1	400
			TLC2252TDA2	10

- (1) For the most current package and ordering information, see the Package Option Addendum at the end of this document, or see the TI web site at [www.ti.com](http://www.ti.com).
- (2) Processing is per the Texas Instruments commercial production baseline and is in compliance with the Texas Instruments Quality Control System in effect at the time of manufacture. Electrical screening consists of DC parametric and functional testing at room temperature only. Unless otherwise specified by Texas Instruments AC performance and performance over temperature is not warranted. Visual Inspection is performed in accordance with MIL-STD-883 Test Method 2010 Condition B at 75X minimum.



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PRODUCTION DATA information is current as of publication date. Products conform to specifications per the terms of the Texas Instruments standard warranty. Production processing does not necessarily include testing of all parameters.

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English Data Sheet: [SLOS819](#)

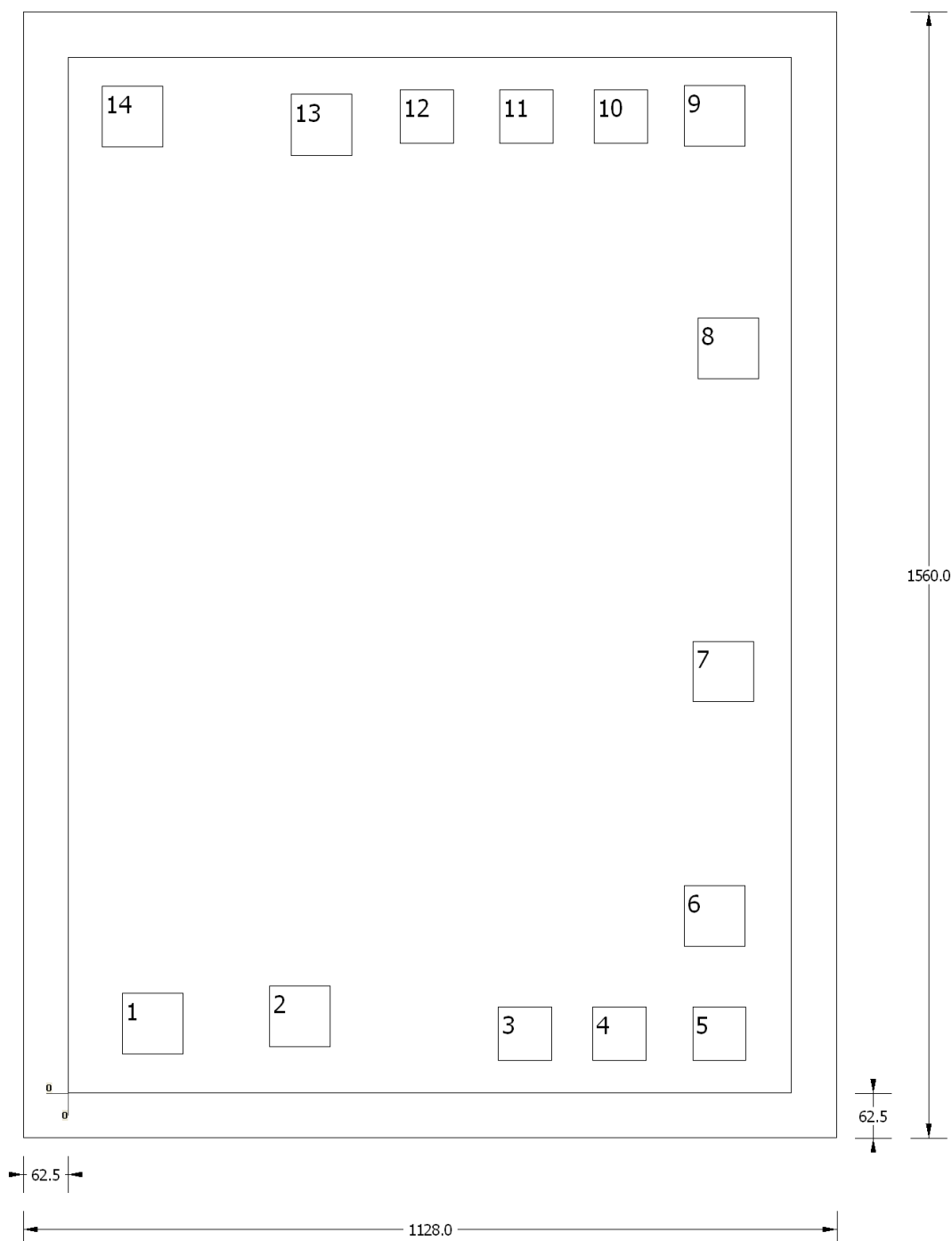


This integrated circuit can be damaged by ESD. Texas Instruments recommends that all integrated circuits be handled with appropriate precautions. Failure to observe proper handling and installation procedures can cause damage.

ESD damage can range from subtle performance degradation to complete device failure. Precision integrated circuits may be more susceptible to damage because very small parametric changes could cause the device not to meet its published specifications.

### BARE DIE INFORMATION

DIE THICKNESS	BACKSIDE FINISH	BACKSIDE POTENTIAL	BOND PAD METALLIZATION COMPOSITION	BOND PAD THICKNESS
10.5 mils.	Silicon with backgrind	Floating	AlCuTiW	1540 nm



**Table 1. Bond Pad Coordinates in Microns**

DESCRIPTION	PAD NUMBER	X MIN	Y MIN	X MAX	Y MAX
1OUT	1	74.65	54	159.65	139
1IN–	2	278.7	63.95	363.7	148.95
N/C	3	596.15	45	671.15	120
N/C	4	727.35	45	802.35	120
N/C	5	865.5	45	940.5	120
1IN+	6	854.05	203	939.05	288
VDD–/GND	7	865.75	541.5	950.75	626.5
2IN+	8	873	988.7	958	1073.7
2IN–	9	854.05	1311	939.05	1396
N/C	10	729.45	1315	804.45	1390
N/C	11	598.25	1315	673.25	1390
N/C	12	460.1	1315	535.1	1390
2OUT	13	308.7	1298.5	393.7	1383.5
VDD+	14	46.8	1309.8	131.8	1394.8

## PACKAGING INFORMATION

Orderable Device	Status (1)	Package Type	Package Drawing	Pins	Package Qty	Eco Plan (2)	Lead finish/ Ball material (6)	MSL Peak Temp (3)	Op Temp (°C)	Device Marking (4/5)	Samples
TLC2252TDA1	ACTIVE			0	221	RoHS & Green	Call TI	N / A for Pkg Type	0 to 0		<a href="#">Samples</a>
TLC2252TDA2	ACTIVE			0	10	RoHS & Green	Call TI	N / A for Pkg Type	0 to 0		<a href="#">Samples</a>

(1) The marketing status values are defined as follows:

**ACTIVE:** Product device recommended for new designs.

**LIFEBUY:** TI has announced that the device will be discontinued, and a lifetime-buy period is in effect.

**NRND:** Not recommended for new designs. Device is in production to support existing customers, but TI does not recommend using this part in a new design.

**PREVIEW:** Device has been announced but is not in production. Samples may or may not be available.

**OBSOLETE:** TI has discontinued the production of the device.

(2) **RoHS:** TI defines "RoHS" to mean semiconductor products that are compliant with the current EU RoHS requirements for all 10 RoHS substances, including the requirement that RoHS substance do not exceed 0.1% by weight in homogeneous materials. Where designed to be soldered at high temperatures, "RoHS" products are suitable for use in specified lead-free processes. TI may reference these types of products as "Pb-Free".

**RoHS Exempt:** TI defines "RoHS Exempt" to mean products that contain lead but are compliant with EU RoHS pursuant to a specific EU RoHS exemption.

**Green:** TI defines "Green" to mean the content of Chlorine (Cl) and Bromine (Br) based flame retardants meet JS709B low halogen requirements of <=1000ppm threshold. Antimony trioxide based flame retardants must also meet the <=1000ppm threshold requirement.

(3) MSL, Peak Temp. - The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

(4) There may be additional marking, which relates to the logo, the lot trace code information, or the environmental category on the device.

(5) Multiple Device Markings will be inside parentheses. Only one Device Marking contained in parentheses and separated by a "~" will appear on a device. If a line is indented then it is a continuation of the previous line and the two combined represent the entire Device Marking for that device.

(6) Lead finish/Ball material - Orderable Devices may have multiple material finish options. Finish options are separated by a vertical ruled line. Lead finish/Ball material values may wrap to two lines if the finish value exceeds the maximum column width.

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