具有轨至轨输出的宽带、低噪声、低失真全差动放大器

查询样品: THS4520-DIE

特性

- 完全差分架构具有轨至轨输出
- 中央输入共模范围
- 断电能力

应用范围

- 数据采集系统
- 高线性模式转换器 (ADC) 放大器
- 无线通信
- 测试和测量
- 声音处理系统

说明

THS4520-DIE 是一款设计用于数据采集系统的宽带、完全差动运算放大器。 它具有极低噪声和低谐波失真。 转换率非常适合于数据采集系统。 针对单位增益稳定而设计。

为了使直流耦合进入 ADC，它的独特输出共模控制电路将输出共模电压保持为置位电压。 共模置位点由内部电路缺省设置为中电源，可由一个外部源过驱动。

此输入和输出在共模电压被设定为中电源时针对最佳性能进行了优化。

ORDERING INFORMATION(1)

PRODUCT	PACKAGE DESIGNATOR	PACKAGE	ORDERABLE PART NUMBER	PACKAGE QUANTITY
THS4520	TD	Bare die in waffle pack(2)	THS4520TDA1	100
			THS4520TDA2	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.

(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.

Please be aware that an important notice concerning availability, standard warranty, and use in critical applications of Texas Instruments semiconductor products and disclaimers thereto appears at the end of this data sheet.

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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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	AL5TiN	675 nm

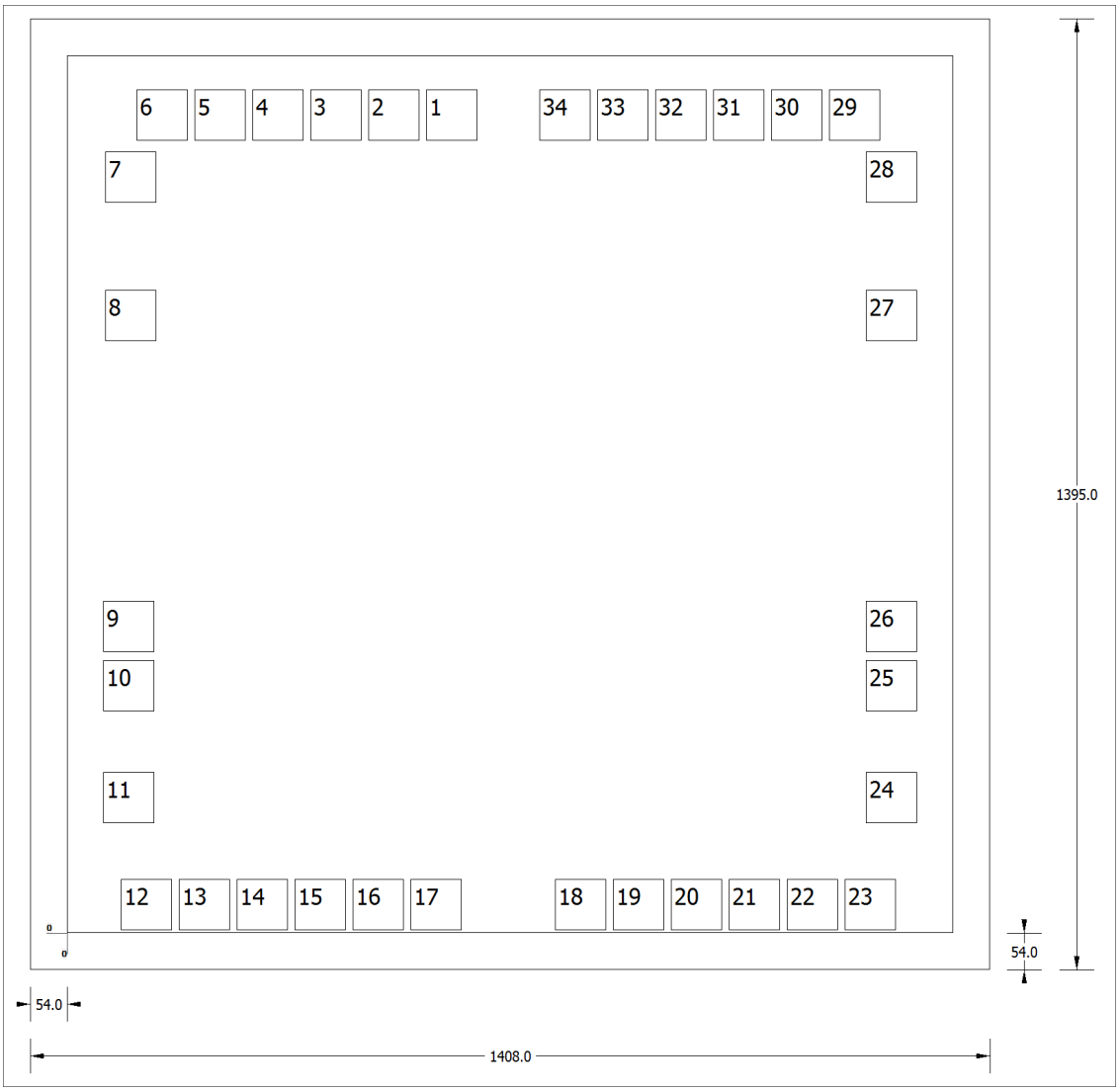

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Table 1. Bond Pad Coordinates in Microns

DESCRIPTION	PAD NUMBER	X MIN	Y MIN	X MAX	Y MAX
VS-	1	526.6	1161.95	601.6	1236.95
VS-	2	441.6	1161.95	516.6	1236.95
VS-	3	356.6	1161.95	431.6	1236.95
VS-	4	271.6	1161.95	346.6	1236.95
VS-	5	186.6	1161.95	261.6	1236.95
VS-	6	101.6	1161.95	176.6	1236.95
N/C	7	55.75	1071.35	130.75	1146.35
VIN-	8	55.75	868.45	130.75	943.45
VOUT+	9	53.25	411.55	128.25	486.55
VOUT+	10	53.25	324.55	128.25	399.55
CM	11	53.25	161.05	128.25	236.05
VS+	12	78.65	4.45	153.65	79.45
VS+	13	163.65	4.45	238.65	79.45
VS+	14	248.65	4.45	323.65	79.45
VS+	15	333.65	4.45	408.65	79.45
VS+	16	418.65	4.45	493.65	79.45
VS+	17	503.65	4.45	578.65	79.45
VS+	18	715.85	4.45	790.85	79.45
VS+	19	800.85	4.45	875.85	79.45
VS+	20	885.85	4.45	960.85	79.45
VS+	21	970.85	4.45	1045.85	79.45
VS+	22	1055.85	4.45	1130.85	79.45
VS+	23	1140.85	4.45	1215.85	79.45
CM	24	1171.75	161.05	1246.75	236.05
VOUT-	25	1171.75	324.55	1246.75	399.55
VOUT-	26	1171.75	411.55	1246.75	486.55
VIN+	27	1171.75	868.45	1246.75	943.45
PD	28	1171.75	1071.35	1246.75	1146.35
VS-	29	1117.85	1161.95	1192.85	1236.95
VS-	30	1032.85	1161.95	1107.85	1236.95
VS-	31	947.85	1161.95	1022.85	1236.95
VS-	32	862.85	1161.95	937.85	1236.95
VS-	33	777.85	1161.95	852.85	1236.95
VS-	34	692.85	1161.95	767.85	1236.95

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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
THS4520TDA1	ACTIVE			0	100	RoHS & Green	Call TI	N / A for Pkg Type	25 to 25		Samples
THS4520TDA2	ACTIVE			0	10	RoHS & Green	Call TI	N / A for Pkg Type	25 to 25		Samples

(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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