

高精度运算放大器

 查询样品: [OPA2277-DIE](#)

特性

- 超低偏移电压
- 超低漂移
- 高开环增益
- 高共模抑制
- 高电源抑制比
- 低偏置电流
- 宽电源电压: $\pm 2\text{ V}$ 至 $\pm 18\text{ V}$
- 低静态电流

应用范围

- 换能器放大器
- 桥式放大器
- 温度测量
- 应变仪放大器
- 精密积分器
- 电池供电仪器
- 测试设备

说明

OPA2277 精度运算放大器替代了行业标准 OP-177。它提供改进的噪声、更宽的输出电压摆幅、并且在将静态电流减少一半的同时将速度增加了一倍。特性包括超低偏移电压和漂移、低偏置电流、高共模抑制比、和高电源抑制比。

OPA2277 运算放大器由具有出色性能的 $\pm 2\text{V}$ 至 $\pm 18\text{V}$ 电源供电运行。与其它只指定一个电源电压的运算放大器不同, OPA2277 被指定满足现实应用的需要;可在 $\pm 5\text{V}$ 至 $\pm 15\text{V}$ 电源范围上的实现一个单一限制应用。在放大器摆动至其额定限值的时候,可保持高性能。

OPA2277 运算放大器易于使用并且没有其它某些运算放大器中会出现的相位反向以及负载问题。此器件在单位增益中保持稳定并且在宽范围的负载条件下提供出色的动态性能。双通道版本特有完全独立的电路,即使当过驱或者过载时,也可实现最低串扰和零交感。

ORDERING INFORMATION⁽¹⁾

PRODUCT	PACKAGE DESIGNATOR	PACKAGE	ORDERABLE PART NUMBER	PACKAGE QUANTITY
OPA2277	TD	Bare Die In Waffle Pack ⁽²⁾	OPA2277TDD1	130
			OPA2277TDD2	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.



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
15 mils.	Silicon with backgrind	V-	Aluminium Pad (TiW/AlCu (0.5%))	1100 nm

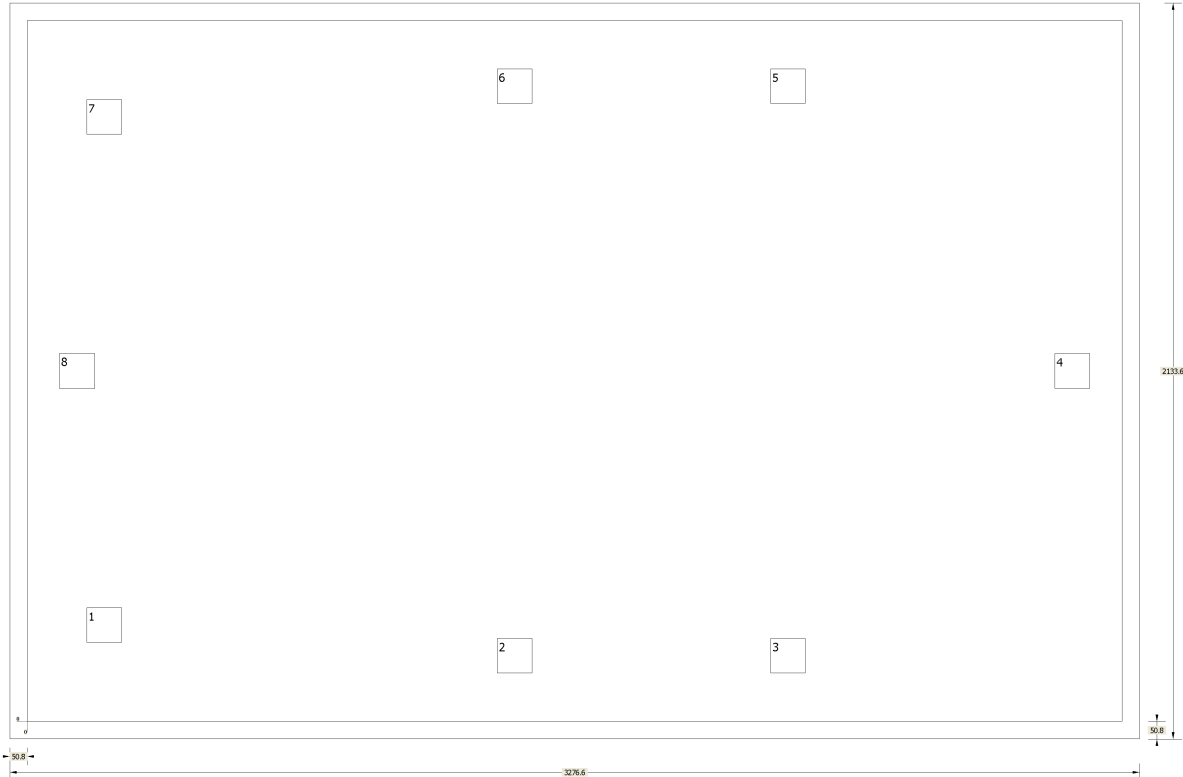


Table 1. Bond Pad Coordinates in Microns⁽¹⁾

DISCRIPTION	PAD NUMBER	X MIN	Y MIN	X MAX	Y MAX
Out A	1	-1414.78	-787.4	-1313.18	-685.8
Neg Input A	2	-224.79	-876.3	-123.19	-774.7
Pos Input A	3	567.69	-876.3	669.29	-774.7
V-	4	1391.92	-50.8	1493.52	50.8
Pos Input B	5	567.69	774.7	669.29	876.3
Neg Input B	6	-224.79	774.7	-123.19	876.3
Out B	7	-1414.78	685.8	-1313.18	787.4
V+	8	-1493.52	-52.07	-1391.92	52.07

(1) Substrate V-.

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
OPA2277TDD1	ACTIVE			0	130	RoHS & Green	Call TI	N / A for Pkg Type			Samples
OPA2277TDD2	ACTIVE			0	10	RoHS & Green	Call TI	N / A for Pkg Type			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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OTHER QUALIFIED VERSIONS OF OPA2277-DIE :

- Enhanced Product : [OPA2277-EP](#)

NOTE: Qualified Version Definitions:

- Enhanced Product - Supports Defense, Aerospace and Medical Applications

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