# 宽频带、单位增益稳定、场效应晶体管 (FET) 输入运算放大器

查询样品: OPA656-DIE

## 特性

- 单位增益带宽
- 低输入偏置电流
- 低偏移和漂移
- 低 **DL**
- 高输出电流
- 低输入电压噪声

## 应用范围

- 宽频带光电二极管放大器
- 采样保持缓冲器
- 电器耦合元件 **(CCD)** 输出缓冲器
- 模数转换器 **(ADC)** 输入缓冲器
- 宽频带精度放大器
- 测试和测量前端

## 说明

OPA656 结合有一个超宽频带、单位增益稳定、电压反馈运算放大器，此运算放大器有一个 FET 输入级以提供一个针对 ADC （模数转换器）缓冲和跨阻应用的超高动态范围放大器。 极低的 DC 误差在光学应用中提供了很好的精度。

高单位增益稳定带宽和 JFET 输入可在高速、低噪声积分器中实现出色的性能。

**ORDERING INFORMATION(1)**

| PRODUCT | PACKAGE DESIGNATOR | PACKAGE(2) | ORDERABLE PART NUMBER | PACKAGE QUANTITY |
|---|---|---|---|---|
| OPA656 | TD | Bare die in waffle pack | OPA656TDB1 | 400 |
| | | | OPA656TDB2 | 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.

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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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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 | $V_S$- | TiW/AlCu (0.5%) | 1100 nm |

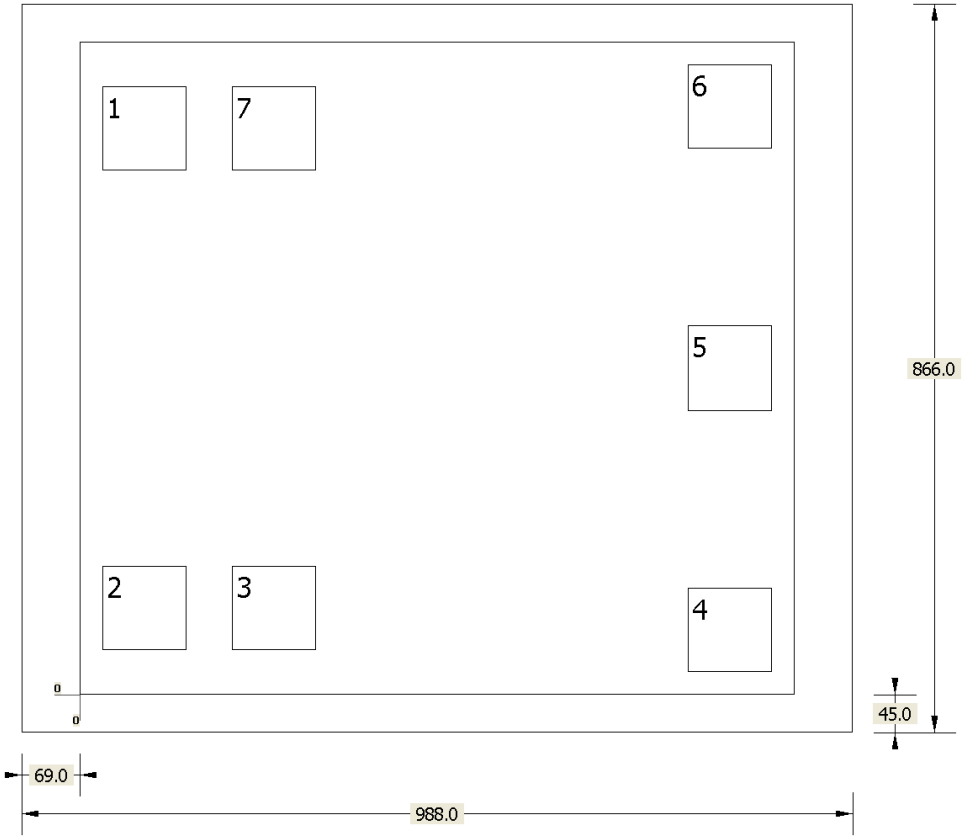



**Table 1. Bond Pad Coordinates in Microns(1)**

| DESCRIPTION | PAD NUMBER | X MIN | Y MIN | X MAX | Y MAX |
|---|---|---|---|---|---|
| Inverting Input | 1 | 27 | 623 | 127 | 723 |
| NonInverting Input | 2 | 27 | 53 | 127 | 153 |
| N/C | 3 | 181 | 53 | 281 | 153 |
| Output | 4 | 723 | 27 | 823 | 127 |
| $V_S$- | 5 | 723 | 337 | 823 | 439 |
| $V_S$+ | 6 | 723 | 649 | 823 | 749 |
| N/C | 7 | 181 | 623 | 281 | 723 |

(1) Substrate is $V_S$-.


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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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OPA656TDB1 | LIFEBUY | | | 0 | 400 | RoHS & Green | Call TI | N / A for Pkg Type | | | |
| OPA656TDB2 | LIFEBUY | | | 0 | 10 | RoHS & Green | Call TI | N / A for Pkg Type | | | |

(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.

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(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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