

## 超高电压线性稳压器

 查询样品: [TPS7A4001-DIE](#)

### 特性

- 超高最大输入电压
- **CMOS** 逻辑电平兼容的使能引脚
- 与陶瓷电容器一起工作室保持稳定
- 内置电流值限制和热关断保护

### 应用范围

- 由工业用总线（具有高电压瞬态）供电的微处理器、微控制器
- 工业自动化
- 电信基础设施
- 车用
- 以太网供电 (**PoE**)
- 发光二极管 (**LED**) 照明
- 偏置电源

### 说明

TPS7A4001-DIE 是一款可在持续直流或瞬态输入电压下工作的极高电压耐受的线性稳压器。

TPS7A4001-DIE 提供一个与标准 **CMOS** 逻辑兼容的使能引脚 (**EN**) 以启用一个低电流关断模式。

TPS7A4001-DIE 具有热关断和电流限制功能以便在故障情况下保护系统。

此外, TPS7A4001-DIE 非常适合在电信和工业应用中从中间电压轨生成一个低压电源; 它不但能够提供一个经充分稳压的电压轨, 并且可在极高和快速电压瞬态期间和保持稳压。这些特性转化为更加简单且成本有效的电涌保护电路而被广泛使用, 其中包括**PoE**, 偏置电源和 **LED** 照明。

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

PRODUCT	PACKAGE DESIGNATOR	PACKAGE	ORDERABLE PART NUMBER	PACKAGE QUANTITY
TPS7A4001	TD	Bare die in waffle pack <sup>(2)</sup>	TPS7A4001TDA1	132
			TPS7A4001TDA2	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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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	AlTiW	760 nm

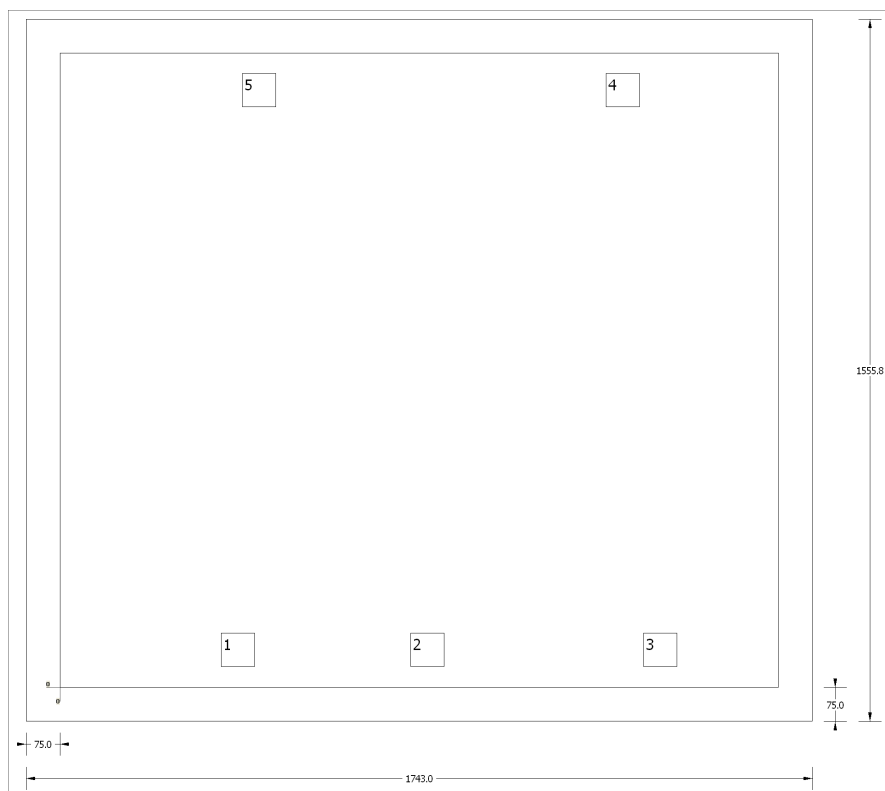


Table 1. Bond Pad Coordinates in Microns

DESCRIPTION	PAD NUMBER	X MIN	Y MIN	X MAX	Y MAX
OUT	1	356.94	46.08	432	121.14
FB	2	776.97	46.08	852.03	121.14
GND	3	1293.12	46.08	1368.18	121.14
EN	4	1210.05	1285.56	1285.11	1360.62
IN	5	403.56	1285.56	478.62	1360.62

**PACKAGING INFORMATION**

Orderable Device	Status (1)	Package Type	Package Drawing	Pins	Package Qty	Eco Plan (2)	Lead/Ball Finish (6)	MSL Peak Temp (3)	Op Temp (°C)	Device Marking (4/5)	Samples
TPS7A4001TDA1	ACTIVE			0	132	TBD	Call TI	N / A for Pkg Type	-40 to 125		<b>Samples</b>
TPS7A4001TDA2	ACTIVE			0	10	TBD	Call TI	N / A for Pkg Type	-40 to 125		<b>Samples</b>

(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) Eco Plan - The planned eco-friendly classification: Pb-Free (RoHS), Pb-Free (RoHS Exempt), or Green (RoHS & no Sb/Br) - please check <http://www.ti.com/productcontent> for the latest availability information and additional product content details.

**TBD:** The Pb-Free/Green conversion plan has not been defined.

**Pb-Free (RoHS):** TI's terms "Lead-Free" or "Pb-Free" mean semiconductor products that are compatible with the current RoHS requirements for all 6 substances, including the requirement that lead not exceed 0.1% by weight in homogeneous materials. Where designed to be soldered at high temperatures, TI Pb-Free products are suitable for use in specified lead-free processes.

**Pb-Free (RoHS Exempt):** This component has a RoHS exemption for either 1) lead-based flip-chip solder bumps used between the die and package, or 2) lead-based die adhesive used between the die and leadframe. The component is otherwise considered Pb-Free (RoHS compatible) as defined above.

**Green (RoHS & no Sb/Br):** TI defines "Green" to mean Pb-Free (RoHS compatible), and free of Bromine (Br) and Antimony (Sb) based flame retardants (Br or Sb do not exceed 0.1% by weight in homogeneous material)

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

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