

## 低压降线性稳压器

查询样品: **TPS71530-DIE**

### 特性

- **24V** 最大输入电压
- 低静态电流
- 低压降稳压器
- 提供**3V**版本的器件
- 最小/最大额定电流限制

### 应用范围

- 超低功耗微控制器
- 手机/无绳电话听筒
- 便携式/电池供电类设备

### 说明

TPS71530低压降 (LDO) 电压稳压器提供了高输入电压、低压降电压、低功耗运行、和微型化封装所具有的优势。TPS71530, 运行在一个3V至 24V 的输入电压范围内, 与任何电容器 ( $\geq 0.47\mu\text{F}$ ) 一起工作时保持稳定。低压降电压和低静态电流使得此器件能够运行在极低的功耗水平上。因此, TPS71530非常适合于为电池管理集成电路 (IC) 供电。特别是, 由于TPS71530在其上的电压达到最低输入电压时即可启用, 所以输出可以快速为电池充电 IC 的运行持续供电。

已经用一个 P 通道金属氧化物半导体场效应晶体管 (PMOS) 导通元件取代了常用的三极管 (PNP) 导通晶体管。由于 PMOS 运行为一个低值电阻器, 负载电流50mA 时 415mV (典型值) 的低压降电压与负载电流直接成比例。在整个输出负载电流范围内, 低静态电流保持稳定。

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

PRODUCT	PACKAGE DESIGNATOR	PACKAGE	ORDERABLE PART NUMBER	PACKAGE QUANTITY
TPS71530	TD <sup>(2)</sup>	Bare die in waffle pack	TPS71530TDB1	400
			TPS71530TDB2	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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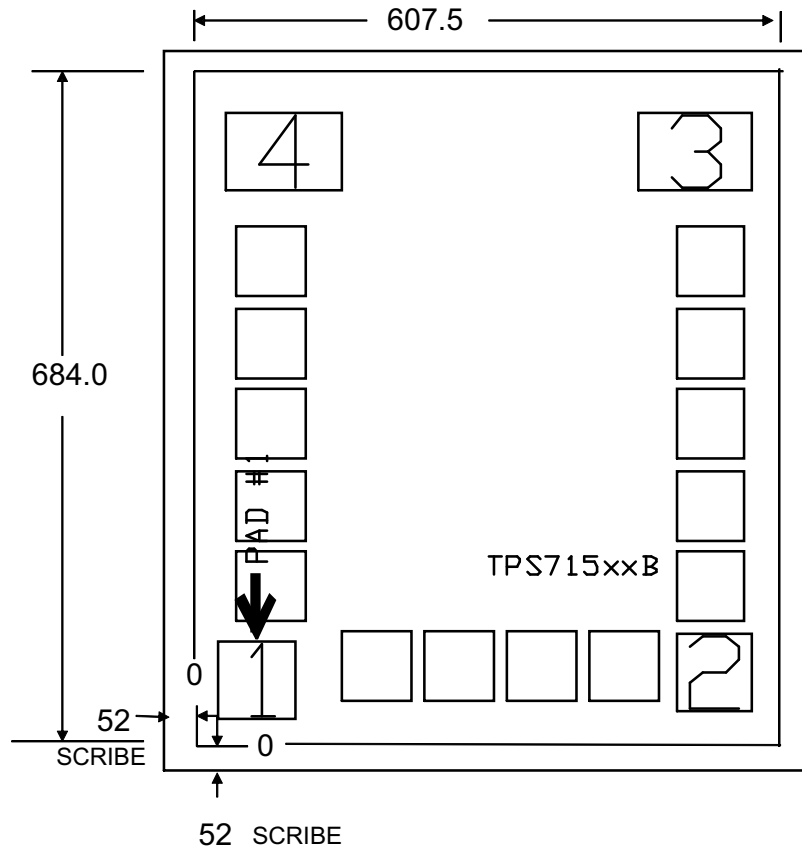


This integrated circuit can be damaged by ESD. Texas Instruments recommends that all integrated circuits be handled with appropriate precautions. Failure to observe proper handling and installation procedures can cause damage.

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
15 mils.	Silicon with backgrind	Floating	Aluminium Pad (TiW/AISiCu (0.5%))	600 nm



**Table 1. Bond Pad Coordinates in Microns<sup>(1)</sup>**

DESCRIPTION	PAD NUMBER	X MIN	Y MIN	X MAX	Y MAX
GND	1	6.03	5.40	90.09	89.46
	2	507.78	15.30	591.84	99.36
OUT	3	465.93	583.74	591.84	667.80
VIN	4	15.39	583.74	141.30	667.80

(1) Substrate is to float.

**PACKAGING INFORMATION**

Orderable Device	Status (1)	Package Type	Package Drawing	Pins	Package Qty	Eco Plan (2)	Lead/Ball Finish	MSL Peak Temp (3)	Op Temp (°C)	Top-Side Markings (4)	Samples
TPS71530TDB1	ACTIVE			0	400	TBD	Call TI	N / A for Pkg Type	0 to 70		<a href="#">Samples</a>
TPS71530TDB2	ACTIVE			0	10	TBD	Call TI	N / A for Pkg Type	0 to 70		<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) 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) Multiple Top-Side Markings will be inside parentheses. Only one Top-Side 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 Top-Side Marking for that device.

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