

低压降线性稳压器

查询样品: [TPS71550-DIE](#)

特性

- **24V** 最大输入电压
- 低静态电流
- 低压降稳压器
- 提供**5V**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

TPS71550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。TPS71550, 运行在一个5V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, TPS71550非常适合于为电池管理集成电路 (IC) 供电。特别是, 由于TPS71550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⁽¹⁾

PRODUCT	PACKAGE DESIGNATOR	PACKAGE	ORDERABLE PART NUMBER	PACKAGE QUANTITY
TPS71550	TD ⁽²⁾	Bare die in waffle pack	TPS71550TDB1	400
			TPS71550TDB2	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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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/AlSiCu (0.5%))	600 nm

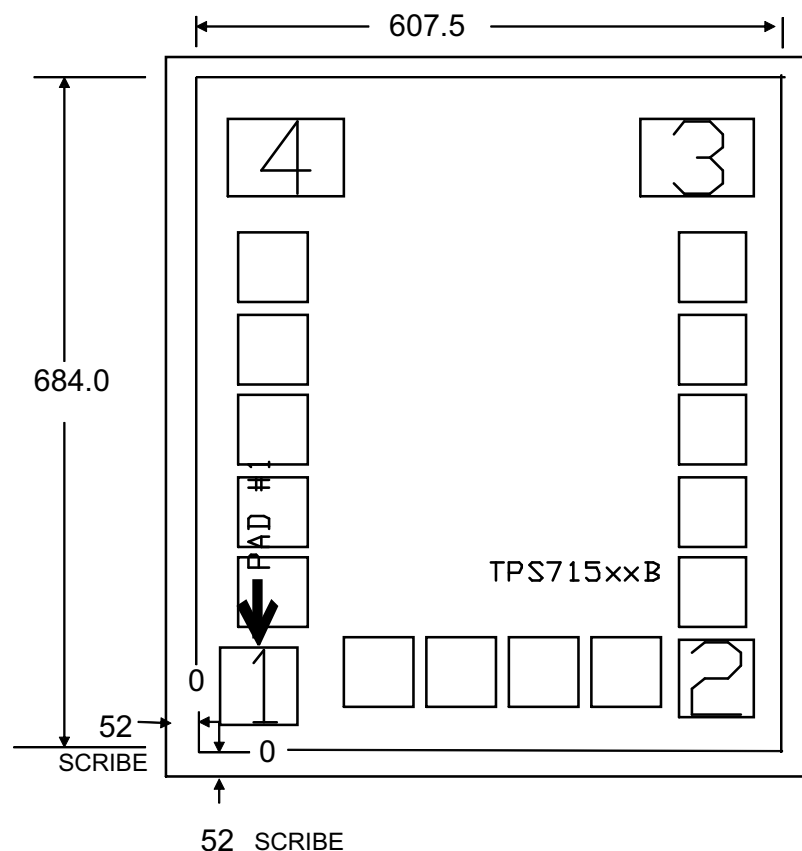


Table 1. Bond Pad Coordinates in Microns⁽¹⁾

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 finish/ Ball material (6)	MSL Peak Temp (3)	Op Temp (°C)	Device Marking (4/5)	Samples
TPS71550TDB1	ACTIVE			0	400	RoHS & Green	Call TI	N / A for Pkg Type	0 to 70		Samples
TPS71550TDB2	ACTIVE			0	10	RoHS & Green	Call TI	N / A for Pkg Type	0 to 70		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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