

UC1834-DIE 高效线性稳压器

1 特性

- 对于正电压稳压器或负电压稳压器设计均适用
- 可调节低阈值电流感应放大器
- 具有可编程延迟的欠压和过压故障报警功能

2 应用

- 无线 LAN
- 可编程逻辑控制器
- 电机控制和驱动
- 太阳能系统
- 声纳, 超声波设备

3 说明

UC1834-DIE 集成电路针对低输入输出差分线性稳压器设计进行了优化。该器件具有高增益放大器和灌电流或拉电流驱动输出, 有助于实现采用外部导通器件的高输出电流设计。利用精密的正负参考电压, 可实现稳压器的两种极性。可使用具有低可调阈值的电流感应放大器来检测和限制正电源线和负电源线上的电流。

此外, UC1834-DIE 还具有一个故障监视电路, 用于检测欠压和过压故障情况。经过一段用户定义的瞬态抑制延迟之后, 此电路会针对上述两种故障情况提供故障报警输出。在过压情况下, 会激活快速放电 (crowbar) 输出。过压锁存器会保持 crowbar 输出, 并且可用于关断驱动器输出。可通过单个输入来调节对器件的系统控制, 该输入同时用作电源复位和远程关断端子。此类芯片具有内部热关断功能, 可防止功耗过高。

订购信息⁽¹⁾

产品	封装标识符	封装	可订购部件号	封装数量
UC1834	TD	裸片采用叠片封装 ⁽²⁾	UC1834VTD1	80
			UC1834VTD2	10

(1) 要获得最新的封装和订购信息, 请参见本文档末尾的封装选项附录, 或者浏览 TI 网站 www.ti.com。

(2) 加工过程遵循德州仪器 (TI) 空间生产基本规范, 制造过程符合德州仪器 (TI) 质量控制系统的实际要求。电气筛选仅包括室温下的直流参数和功能测试。除非德州仪器 (TI) 另有规定, 否则交流性能和过温性能无法得到保证。按照 MIL-STD-883 测试方法 2010 条件 B 执行目视检查, 至少检查 75 次。



UC1834-DIE

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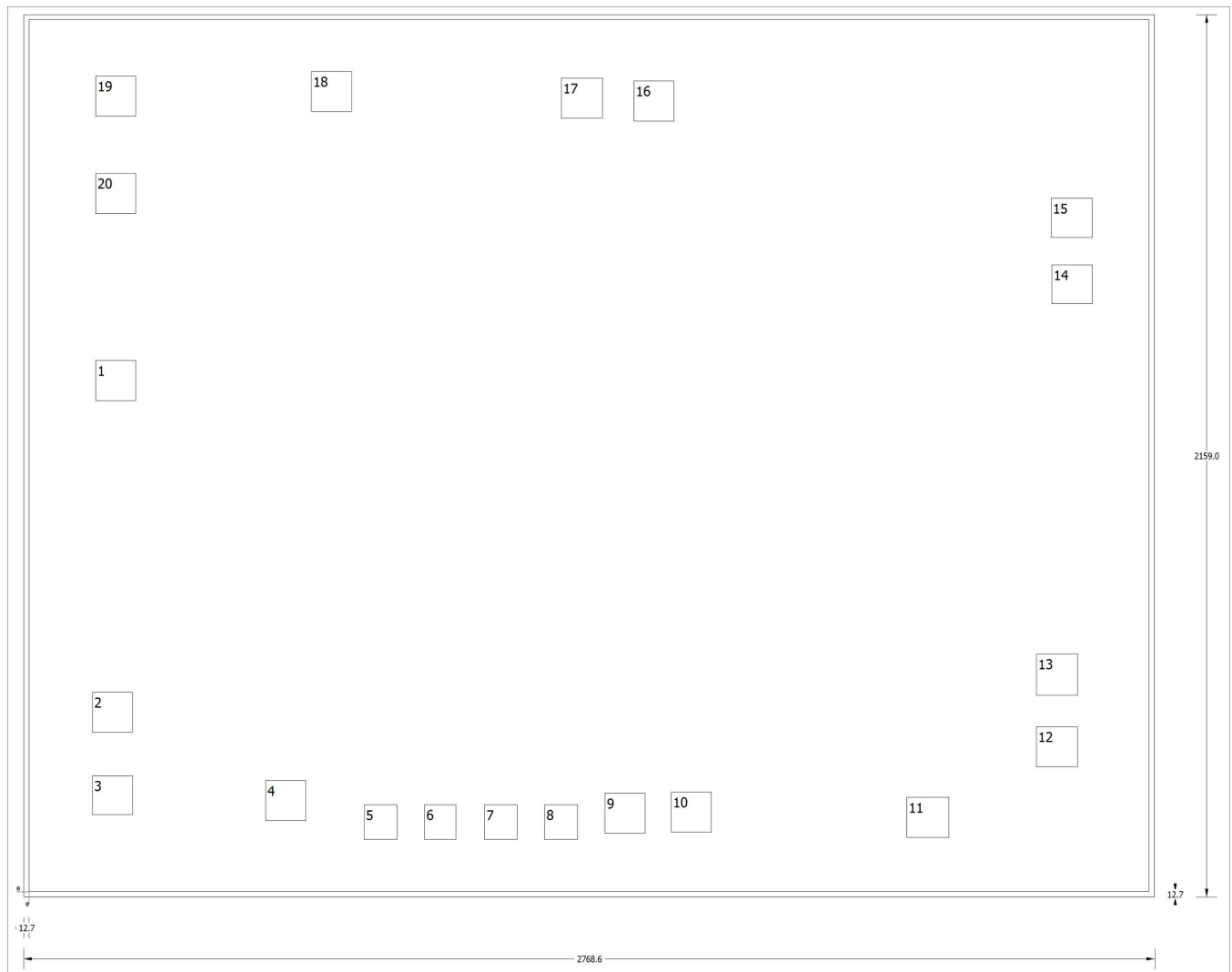


ESD 可能会损坏该集成电路。德州仪器 (TI) 建议通过适当的预防措施处理所有集成电路。如果不遵守正确的处理措施和安装程序，可能会损坏集成电路。

ESD 的损坏小至导致微小的性能降级，大至整个器件故障。精密的集成电路可能更容易受到损坏，这是因为非常细微的参数更改都可能会导致器件与其发布的规格不相符。

4 Bare Die Information

DIE THICKNESS	BACKSIDE FINISH	BACKSIDE POTENTIAL	BOND PAD METALLIZATION COMPOSITION	BOND PAD THICKNESS
10.5 mils	Silicon with backgrind	Floating	AlCu2%	2000 nm



Bond Pad Coordinates in Microns

DESCRIPTION	PAD NUMBER	X MIN	Y MIN	X MAX	Y MAX
VIN+	1	162.56	1201.42	261.62	1300.48
-2.0-V reference	2	154.94	388.62	254	487.68
1.5-V reference	3	154.94	187.96	254	284.48
Threshold adj.	4	579.12	172.72	678.18	271.78
N/C	5	820.42	127	901.7	213.36
N/C	6	967.74	127	1046.48	213.36
N/C	7	1115.06	127	1196.34	213.36
N/C	8	1262.38	127	1343.66	213.36
VIN-	9	1409.7	142.24	1508.76	241.3
Sense-	10	1572.26	144.78	1671.32	243.84
Sense+	11	2148.84	132.08	2252.98	231.14
Non-inverting input	12	2466.34	304.8	2567.94	403.86
Inverting input	13	2466.34	480.06	2567.94	581.66
Fault alert	14	2504.44	1437.64	2603.5	1534.16
Fault delay	15	2501.9	1600.2	2603.5	1696.72
Driver sink	16	1480.82	1884.68	1579.88	1983.74
Driver source	17	1303.02	1892.3	1404.62	1991.36
Compensation/shutdown	18	690.88	1907.54	789.94	2006.6
Overvoltage latch output/reset	19	162.56	1897.38	261.62	1996.44
Crowbar gate	20	162.56	1658.62	261.62	1757.68

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
UC1834VTD1	ACTIVE			0	80	RoHS & Green	Call TI	N / A for Pkg Type	25 to 25		Samples
UC1834VTD2	ACTIVE			0	10	RoHS & Green	Call TI	N / A for Pkg Type	25 to 25		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.

OBSELETE: 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 UC1834-DIE :

- Space : [UC1834-SP](#)

NOTE: Qualified Version Definitions:

- Space - Radiation tolerant, ceramic packaging and qualified for use in Space-based application

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