

## 电流模式脉宽调制 (PWM) 控制器

### 特性

- 自动前馈补偿
- 可编程逐脉冲电流限制
- 推挽配置中的自动对称校正
- 增强型负载响应特性
- 针对模块化电源系统的并行运行功能
- 具有宽共模范围的差分电流感测放大器
- 双脉冲抑制
- 欠压闭锁
- 软启动功能
- 关断端子

### 说明

UC1846 控制集成电路 (IC) 在保持最小外部部件数量的同时提供执行定频、电流模式控制机制所需的全部特性。这个技术的出色性能可在改进的线路稳压、增强型负载响应特性，和一个更简单、易于设计的控制环路中测得。拓扑优势在保持电流均流的基础上包含固有逐脉冲电流限制功能、针对推挽转换器的自动对称校正和电源模块的并行功能。

除了软启动功能外，保护电路还包括内置欠压闭锁和可编程电流限制。还提供关断功能，此功能启动一个具有自动重启的完全关断或者将电源锁存。

其它特性包括完全锁存运行，双脉冲抑制和期限调节功能。

在关闭状态下，UC1846 特有低输出。

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

PRODUCT	PACKAGE DESIGNATOR	PACKAGE	ORDERABLE PART NUMBER	PACKAGE QUANTITY
UC1846	TD	Bare die in waffle pack <sup>(2)</sup>	UC1846VTD1	100
			UC1846VTD2	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.



Please be aware that an important notice concerning availability, standard warranty, and use in critical applications of Texas Instruments semiconductor products and disclaimers thereto appears at the end of this data sheet.

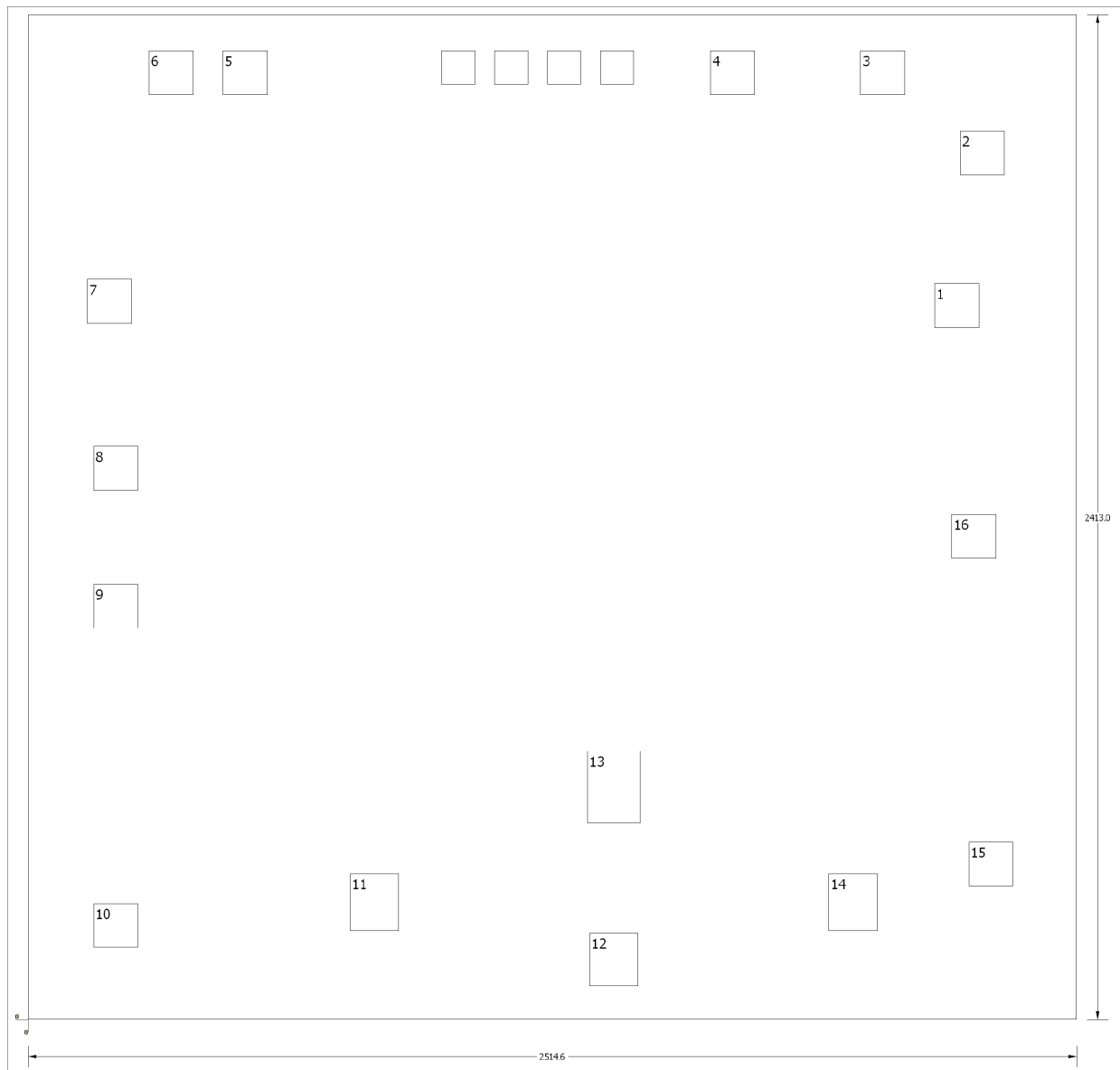


This integrated circuit can be damaged by ESD. Texas Instruments recommends that all integrated circuits be handled with appropriate precautions. Failure to observe proper handling and installation procedures can cause damage.

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	AlCu2	2000 nm



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

DESCRIPTION	PAD NUMBER	X MIN	Y MIN	X MAX	Y MAX
C/S SS	1	2174.24	1661.16	2280.92	1767.84
VREF	2	2235.2	2026.92	2341.88	2133.6
C/S-	3	1996.44	2219.96	2103.12	2326.64
C/S+	4	1635.76	2219.96	1742.44	2326.64
E/A+	5	467.36	2219.96	574.04	2326.64
E/A-	6	289.56	2219.96	396.24	2326.64
COMP	7	142.24	1671.32	248.92	1778
CT	8	157.48	1270	264.16	1376.68
RT	9	157.48	939.8	264.16	1046.48
Sync	10	157.48	172.72	264.16	279.4
A Out	11	772.16	213.36	889	350.52
GND	12	1346.2	81.28	1463.04	208.28
VC	13	1341.12	472.44	1468.12	645.16
B Out	14	1920.24	213.36	2037.08	350.52
VIN	15	2255.52	320.04	2362.2	426.72
Shutdown	16	2214.88	1107.44	2321.56	1214.12

**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
UC1846VTD1	ACTIVE			0	100	RoHS & Green	Call TI	N / A for Pkg Type	-55 to 125		<a href="#">Samples</a>
UC1846VTD2	ACTIVE			0	10	RoHS & Green	Call TI	N / A for Pkg Type	-55 to 125		<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.

**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 UC1846-DIE :**

- Enhanced Product : [UC1846-EP](#)
- Space : [UC1846-SP](#)

## NOTE: Qualified Version Definitions:

- Enhanced Product - Supports Defense, Aerospace and Medical Applications
- Space - Radiation tolerant, ceramic packaging and qualified for use in Space-based application

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