

高效、高侧/低侧驱动器

特性

- 驱动两个
高端/低端配置的 **N** 通道金属氧化物半导体场效应晶体管 (**MOSFET**)
- 最大引导电压
- 最大 **VDD** 电压
- 片载 **RD** 自举二极管
- 针对高侧和
低侧驱动器的欠压闭锁

应用范围

- 针对电信、数据通信和商业市场的电源
- 半桥式应用和全桥式转换器
- 隔离式总线架构
- 两开关正激式转换器
- 有源钳位正激式转换器
- 高压同步降压型转换器
- **D** 类音频放大器

说明

UCC27201A 是一款系列高频 **N** 通道 **MOSFET** 驱动器，此驱动器包括一个自举二极管和具有旨在实现最大的控制灵活性具有独立输入的

高侧/低侧驱动器。这可在半桥式、全桥式、两开关正激式和有源钳位正激式转换器中实现 **N** 通道 **MOSFET** 控制。低侧和高侧栅极驱动器是独立控制的，并在彼此的接通和关断之间实现了至 **1ns** 的匹配。**UCC27201A** 基于广泛使用的 **UCC27201** 驱动器，但进行了一些改进。为了提升嘈杂电源环境中的性能，**UCC27201A** 运用了一种增强型 **ESD** 输入结构，而且能够在其 **HS** 引脚上耐受 **-18V**（最大值）的电压。

ORDERING INFORMATION⁽¹⁾

PRODUCT	PACKAGE DESIGNATOR	PACKAGE	ORDERABLE PART NUMBER	PACKAGE QUANTITY
UCC27201A	TD	Bare die in gel pack ⁽²⁾	UCC27201ATDA2	10
			UCC27201ATDA3	120

- (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.



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	GND	Al-Cu (0.5%)	598 nm

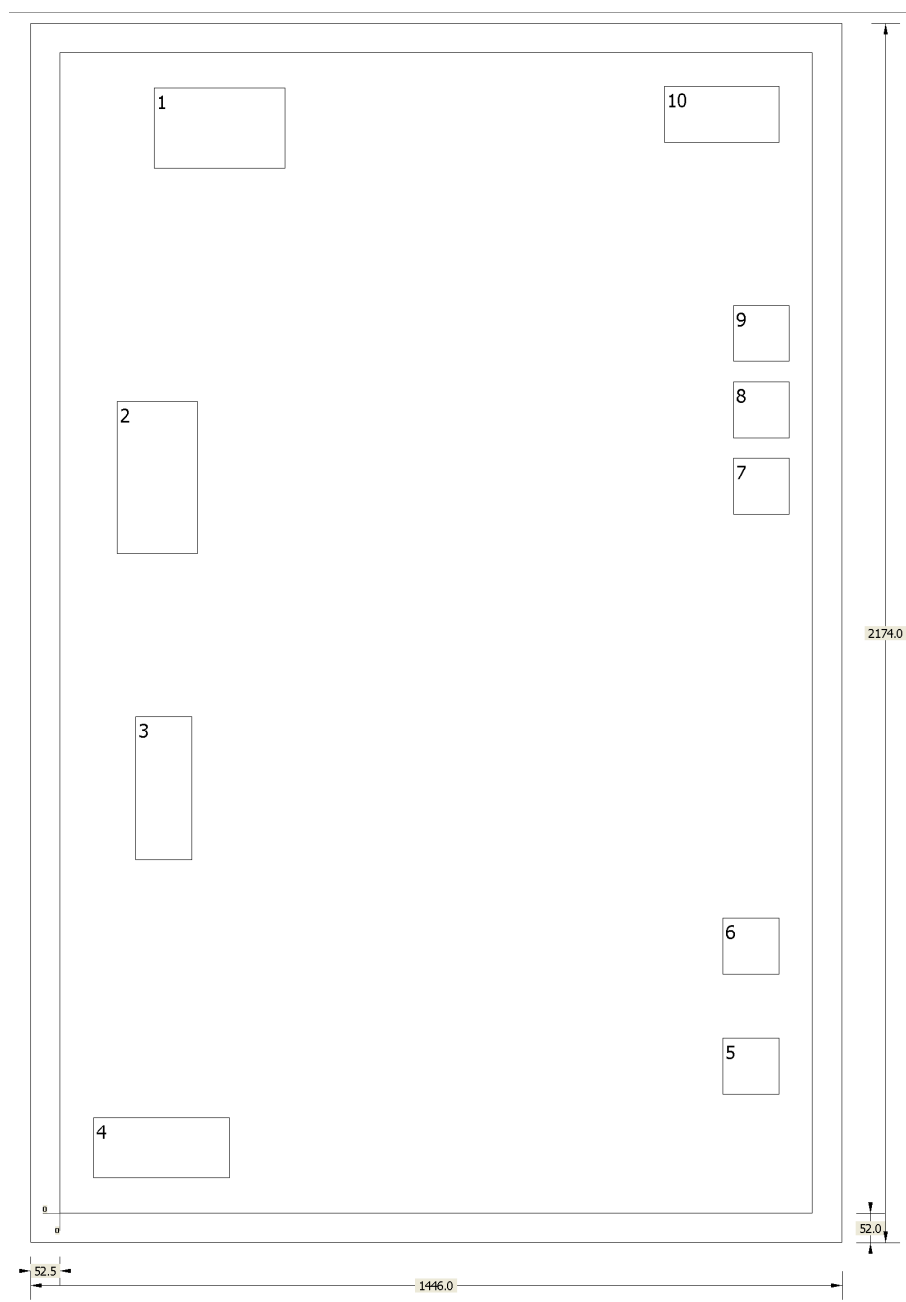


Table 1. Bond Pad Coordinates in Microns⁽¹⁾

DESCRIPTION	PAD NUMBER	X MIN	Y MIN	X MAX	Y MAX
VDD	1	167.58	1863	401.58	2007
HB	2	102.24	1175.94	246.24	1447.74
HO	3	135	629.82	235.8	886.32
HS	4	59.58	62.82	302.58	170.82
HI	5	1180.8	212.13	1281.6	312.93
LI	6	1180.8	426.42	1281.6	527.22
GND	7	1199.7	1245.87	1300.5	1346.67
GND	8	1199.7	1381.86	1300.5	1482.66
GND	9	1199.7	1518.66	1300.5	1619.46
LO	10	1077.3	1908.9	1281.6	2009.7

(1) Substrate GND.

PACKAGING INFORMATION

Orderable part number	Status (1)	Material type (2)	Package Pins	Package qty Carrier	RoHS (3)	Lead finish/ Ball material (4)	MSL rating/ Peak reflow (5)	Op temp (°C)	Part marking (6)
UCC27201ATDA2	Active	Production	null (null) 0	10 TUBE	Yes	Call TI	N/A for Pkg Type	0 to 0	
UCC27201ATDA2.A	Active	Production	null (null) 0	10 TUBE	Yes	Call TI	N/A for Pkg Type	0 to 0	
UCC27201ATDA3	Active	Production	null (null) 0	120 TUBE	Yes	Call TI	N/A for Pkg Type	0 to 0	
UCC27201ATDA3.A	Active	Production	null (null) 0	120 TUBE	Yes	Call TI	N/A for Pkg Type	0 to 0	

⁽¹⁾ **Status:** For more details on status, see our [product life cycle](#).

⁽²⁾ **Material type:** When designated, preproduction parts are prototypes/experimental devices, and are not yet approved or released for full production. Testing and final process, including without limitation quality assurance, reliability performance testing, and/or process qualification, may not yet be complete, and this item is subject to further changes or possible discontinuation. If available for ordering, purchases will be subject to an additional waiver at checkout, and are intended for early internal evaluation purposes only. These items are sold without warranties of any kind.

⁽³⁾ **RoHS values:** Yes, No, RoHS Exempt. See the [TI RoHS Statement](#) for additional information and value definition.

⁽⁴⁾ **Lead finish/Ball material:** Parts 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.

⁽⁵⁾ **MSL rating/Peak reflow:** The moisture sensitivity level ratings and peak solder (reflow) temperatures. In the event that a part has multiple moisture sensitivity ratings, only the lowest level per JEDEC standards is shown. Refer to the shipping label for the actual reflow temperature that will be used to mount the part to the printed circuit board.

⁽⁶⁾ **Part marking:** There may be an additional marking, which relates to the logo, the lot trace code information, or the environmental category of the part.

Multiple part markings will be inside parentheses. Only one part marking contained in parentheses and separated by a "~" will appear on a part. If a line is indented then it is a continuation of the previous line and the two combined represent the entire part marking for that device.

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OTHER QUALIFIED VERSIONS OF UCC27201A-DIE :

- Automotive : [UCC27201A-Q1](#)

NOTE: Qualified Version Definitions:

- Automotive - Q100 devices qualified for high-reliability automotive applications targeting zero defects

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