

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.



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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
10.5 mils.	Silicon with backgrind	GND	Al-Cu (0.5%)	598 nm

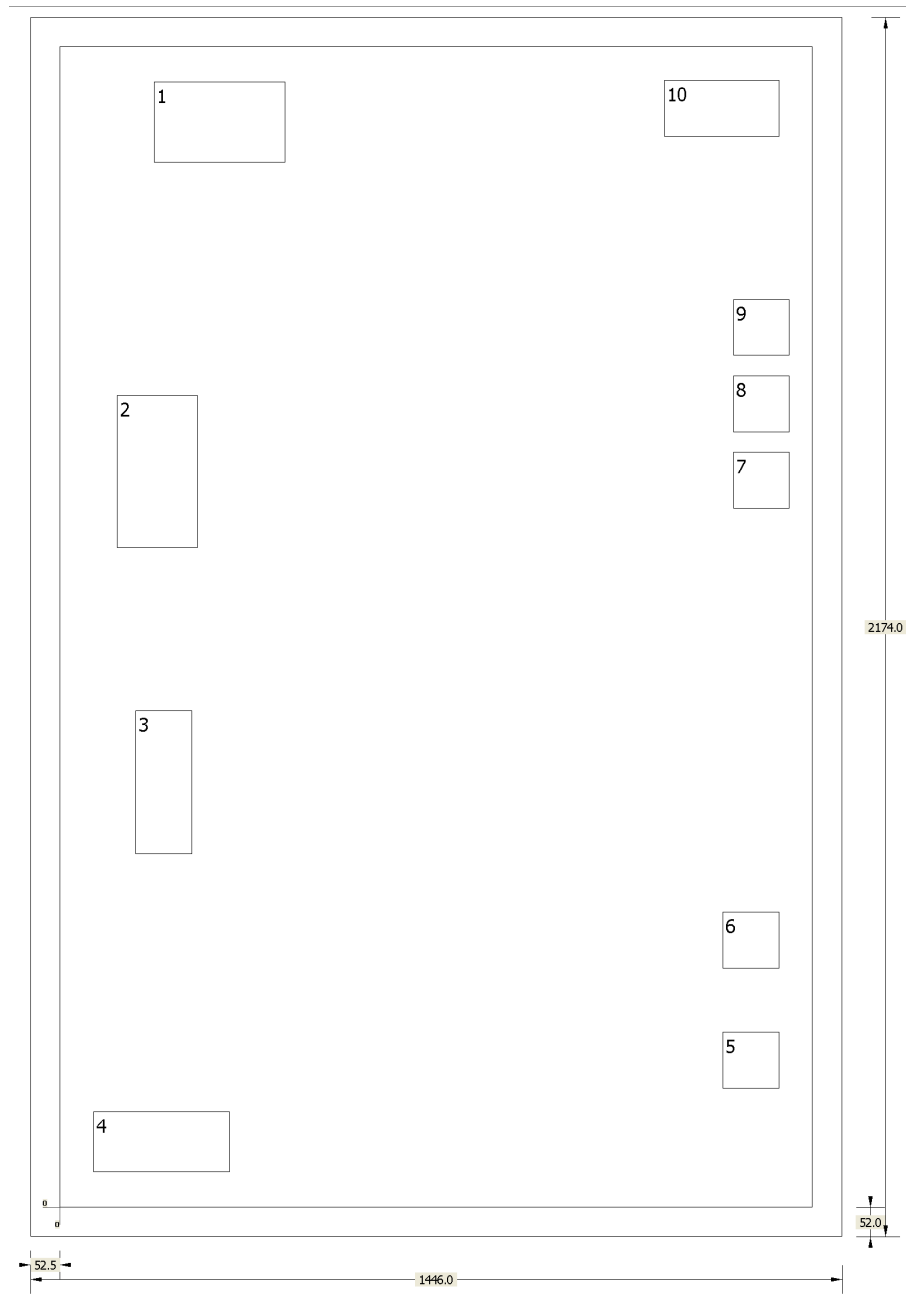


Table 1. Bond Pad Coordinates in Microns⁽¹⁾

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 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
UCC27201ATDA2	ACTIVE			0	10	RoHS & Green	Call TI	N / A for Pkg Type	0 to 0		Samples
UCC27201ATDA3	ACTIVE			0	120	RoHS & Green	Call TI	N / A for Pkg Type	0 to 0		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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