



ZHEJIANG UNIU-NE Technology CO., LTD

浙江宇力微新能源科技有限公司



U3315-6 Data Sheet

V 3.0

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High Current IO+/- 1.2/1.5A 3-PHASE BRIDGE DRIVER

General Description

U3315/6 is a high-speed 3-phase gate driver for power MOSFET and IGBT devices with three independent high and low side referenced output channels. Built-in dead time protection and shoot-through protection prevent damage to the half-bridge. The UVLO circuits prevent malfunction when VCC and VBS are lower than the specified threshold voltage. A novel high-voltage BCD process and common-mode noise canceling technique provide stable operation of high-side drivers under high dV/dt noise conditions while achieving excellent negative transient voltage tolerance. low-PW consumption is included so that standby mode may be used to set the chip into a low quiescent current state to realize long battery lifetime.

Key Features

- Floating channel designed for bootstrap operation
- Fully operational to +300 V
- Tolerant to negative transient voltage
- Gate drive supply range from 4.5V to 20V
- Independent 3 half-bridge drivers
- Low side output out of phase with inputs. High side outputs out of phase
- 3.3 V logic compatible
- Lower di/dt gate drive for better noise immunity

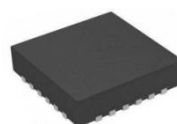
Applications

- E-BIKE/electric power tool 3-phase motor driver
- Battery-powered mini/micro motor control
- General purpose inverter

Product Summary

V _{OFFSET}	300V max
I _{O+/-}	1.2 A / 1.5A
V _{CC}	4.5V to 20V
t _{on/off} (typ.)	220 & 110ns
Work Tem	-40 ~125 °C

Package



QFN24



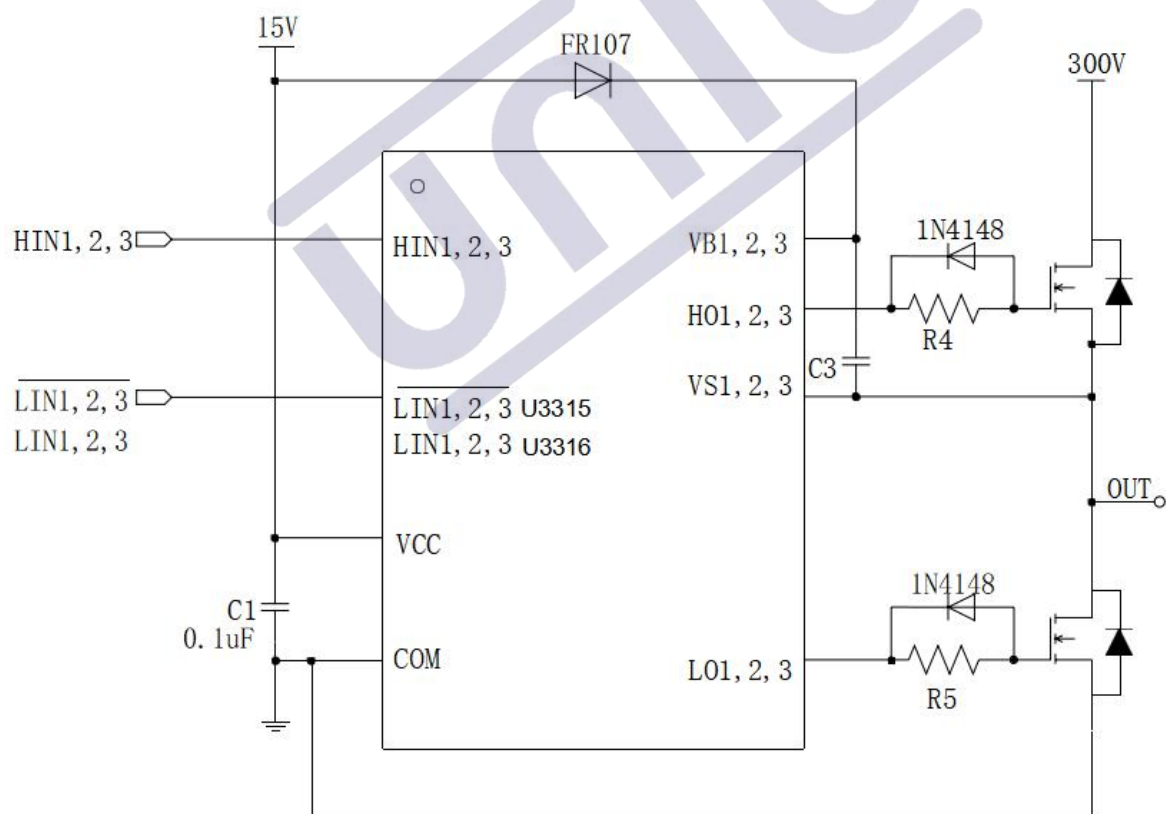
20-PIN TSSOP

Products Information

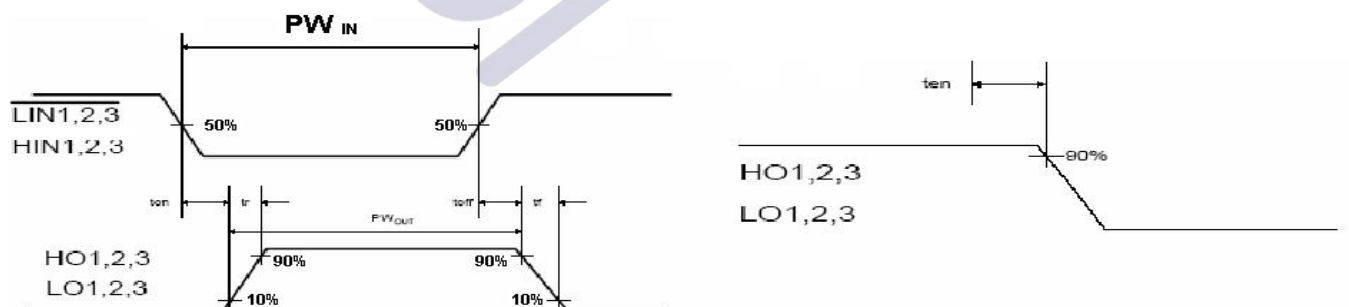
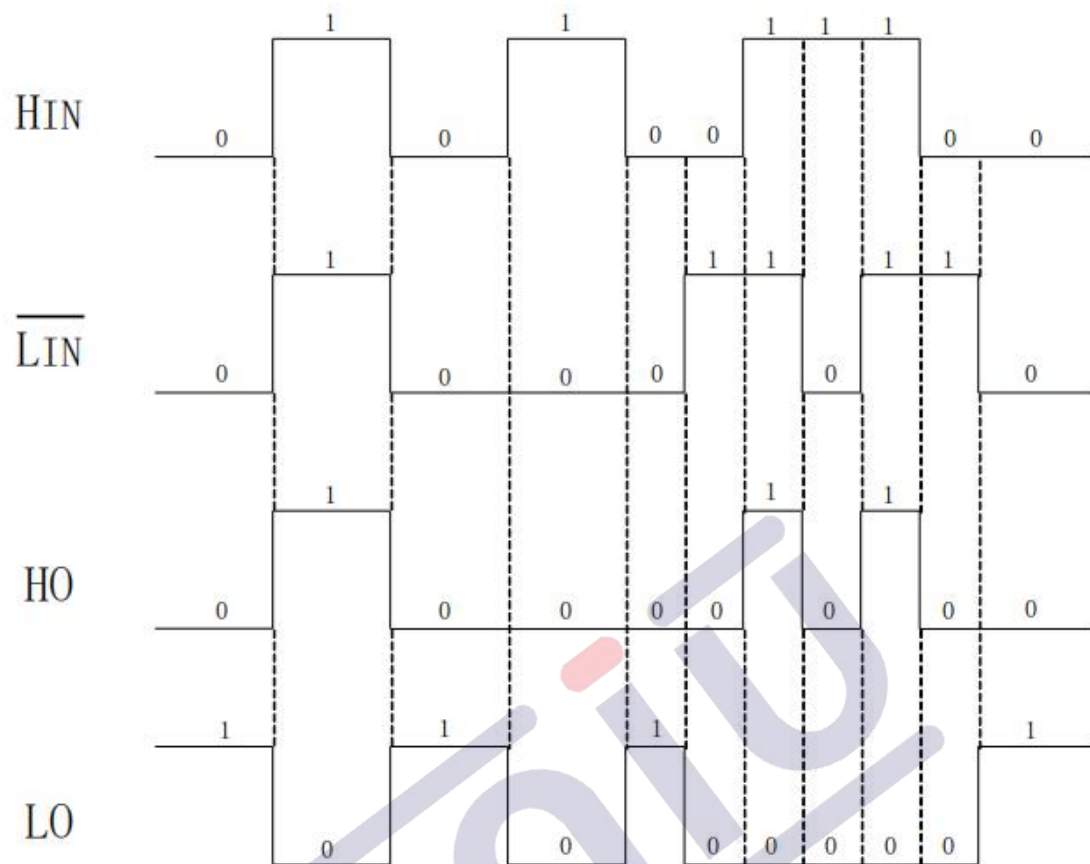
Base Part Number	Package Type	Standard OUT		V _{OFFSET}	Logic Control
		IO+	IO-		
U3315	QFN24	1.2A	1.5A	300V	HIN & $\overline{\text{LIN}}$
U3316	QFN24	1.2A	1.5A	300V	HIN & LIN

Base Part Number	Package Type	Standard OUT		V _{OFFSET}	Logic Control
		IO+	IO-		
U3315	TSSOP20	1.2A	1.5A	300V	HIN & $\overline{\text{LIN}}$
U3316	TSSOP20	1.2A	1.5A	300V	HIN & LIN

Typical Application

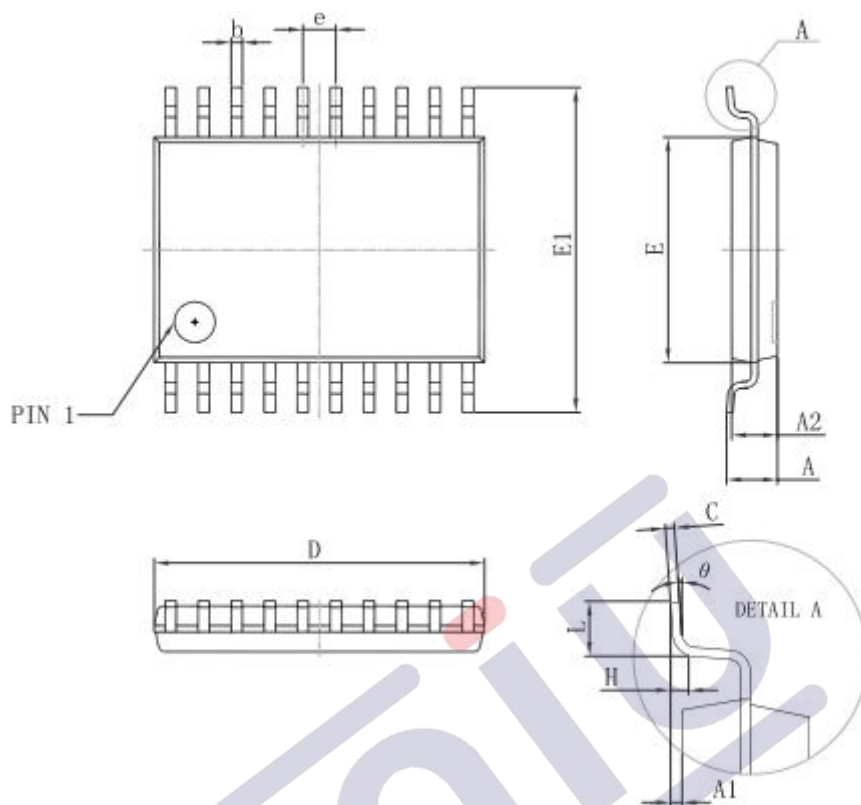


Typical Performance Characteristics



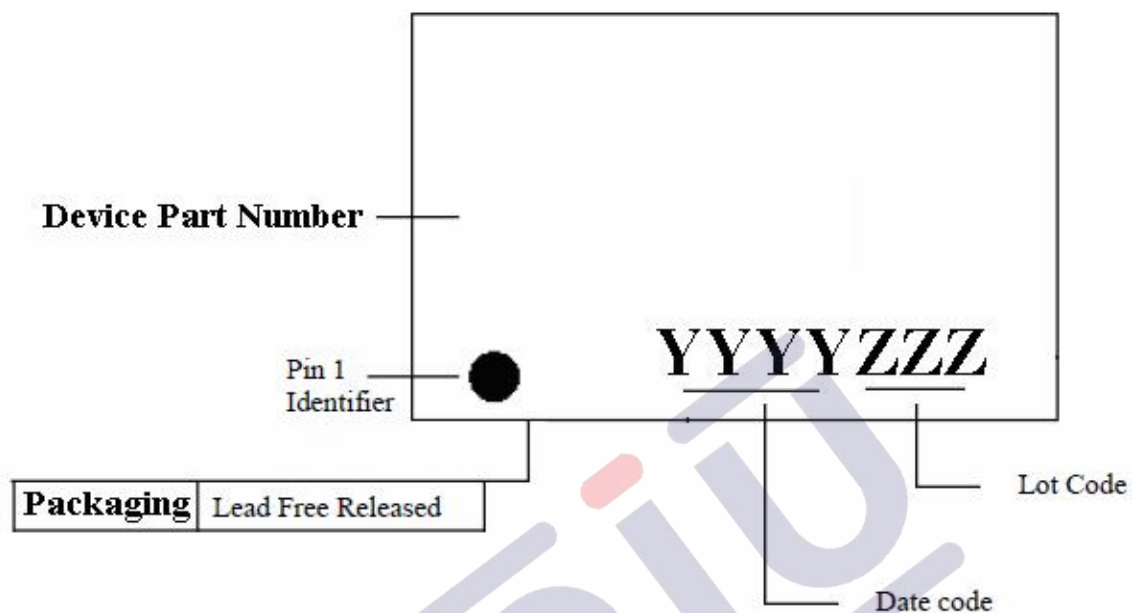
Mechanical Dimensions

TSSOP20

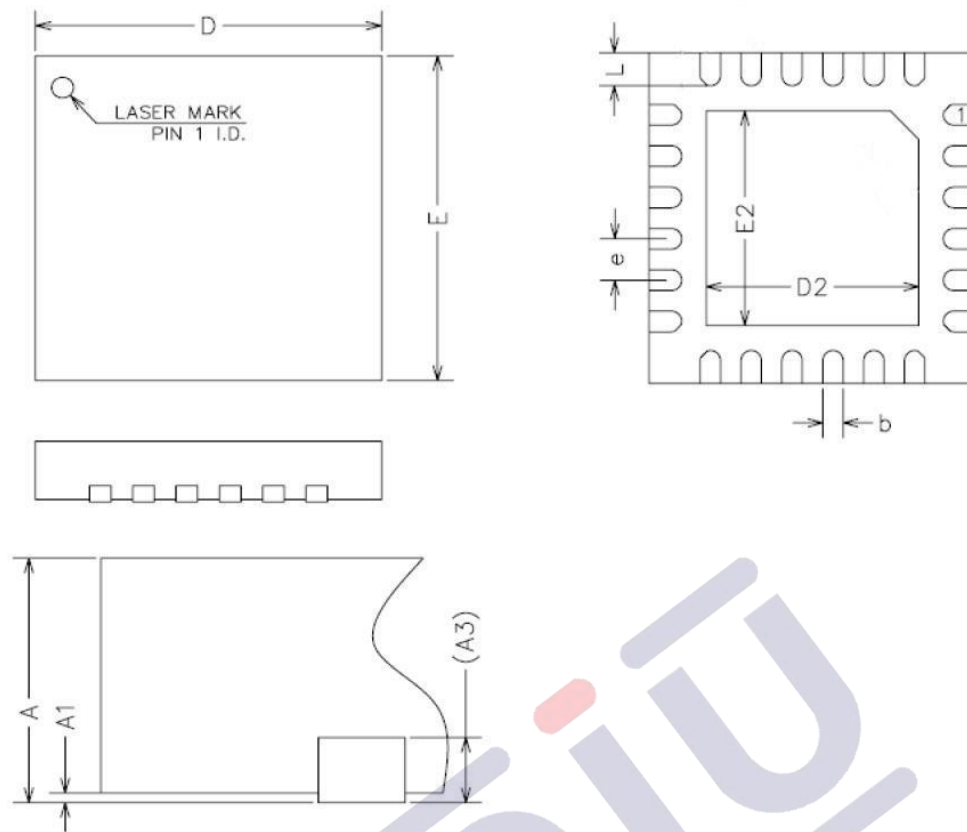


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
D	6.400	6.600	0.252	0.259
E	4.300	4.500	0.169	0.177
b	0.190	0.300	0.007	0.012
c	0.090	0.200	0.004	0.008
E1	6.250	6.550	0.246	0.258
A		1.200		0.047
A2	0.800	1.000	0.031	0.039
A1	0.050	0.150	0.002	0.006
e	0.65(BSC)		0.026(BSC)	
L	0.500	0.700	0.020	0.028
H	0.25(TYP)		0.01(TYP)	
θ	1°	7°	1°	7°

Ordering Information



24 PINS, QFN



Symbol	Dimensions(mm)		
	Min.	Nom.	Max.
A	0.70	0.75	0.80
A1	0.00	0.02	0.05
A3	0.20 REF		
b	0.18	0.25	0.30
D	4.00 BSC		
D2	2.50	2.65	2.80
E	4.00 BSC		
E2	2.50	2.65	2.80
e	0.50 BSC		
L	0.35	0.40	.0.45

Notes:

1. All dimensions refer to JEDEC MO-220 WGGD-6
2. All dimensions are in mm

1.版本记录

DATE	REV.	DESCRIPTION
2018/04/19	1.0	First Release
2019/05/21	2.0	Change the package
2021/10/19	3.0	Layout adjustment

2.免责声明

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