# 3.8V-32V Vin, 3A Synchronous Step-down DCDC Converter with EMI Reduction

## FEATURES

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| BST | 6 | Power supply for the high-side power MOSFET gate driver. Must connect a 0.1uF or greater ceramic capacitor between BST pin and SW node. |

## RECOMMENDED OPERATING CONDITIONS

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## ESD RATINGS

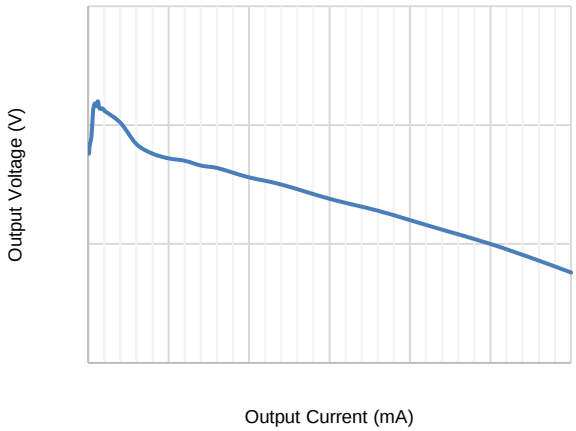
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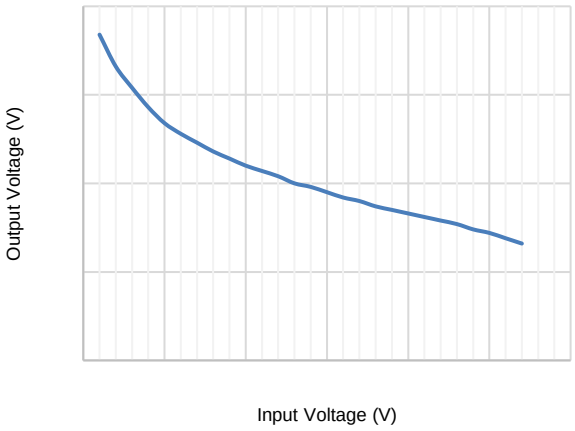
(1)
(2)

## THERMAL INFORMATION

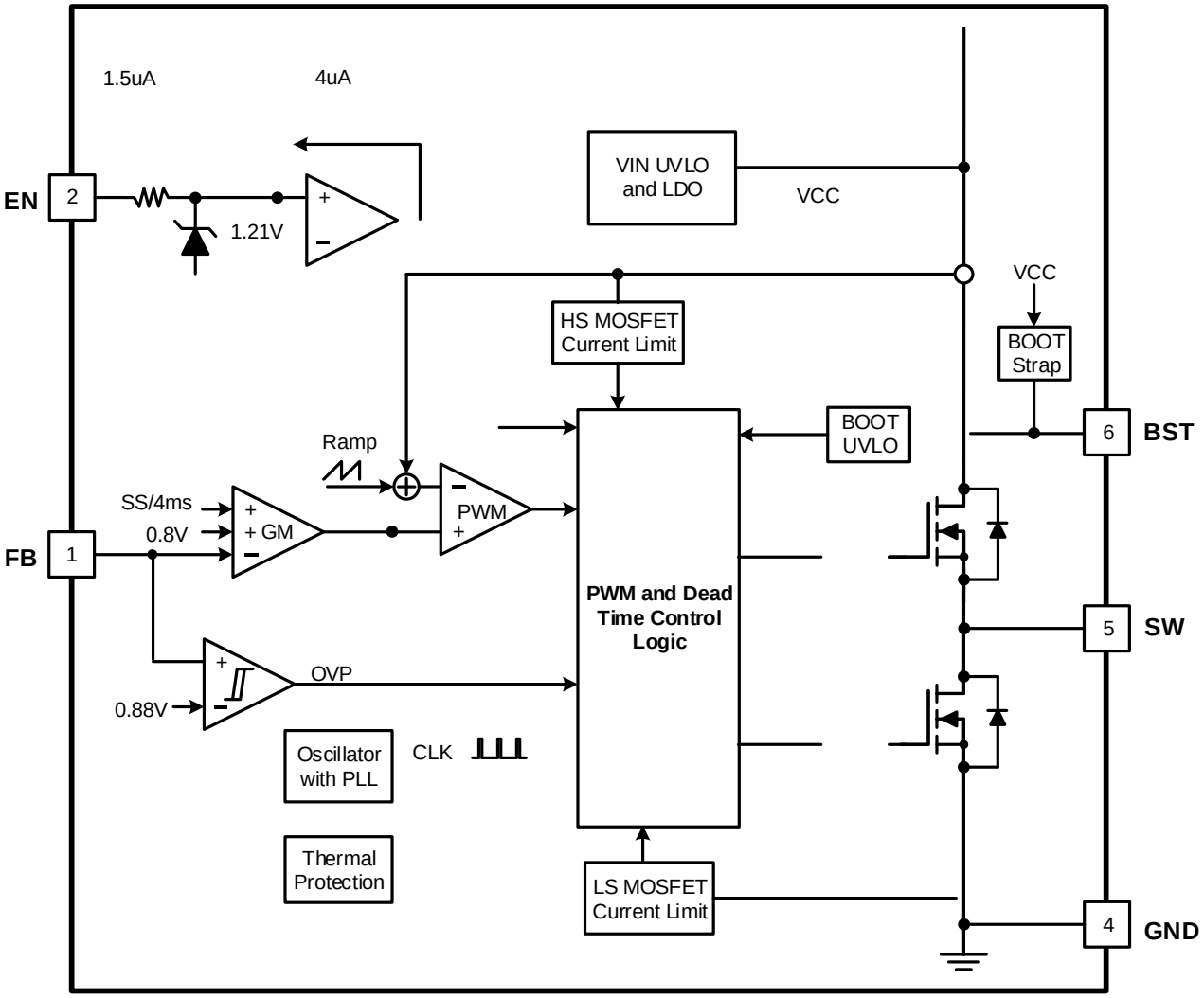
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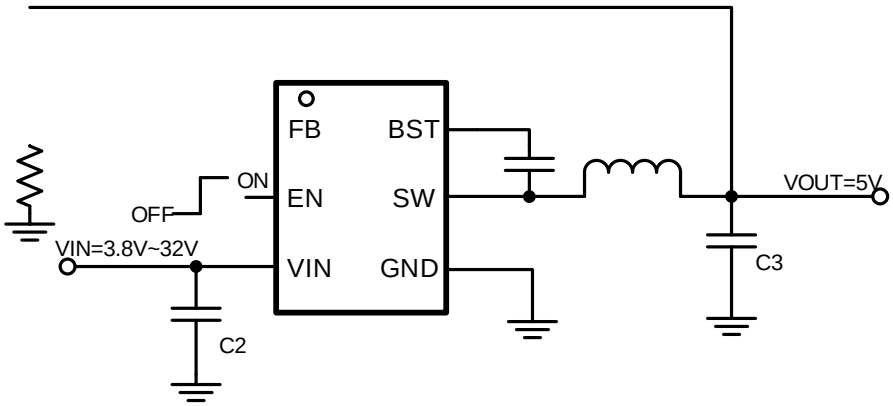

Output Voltage (V)
Output Current (mA)


Output Voltage (V)
Input Voltage (V)

## FUNCTIONAL BLOCK DIAGRAM



## APPLICATION INFORMATION




| Design Parameters | Example Value |
|---|---|
| Input Voltage | 24V |
| Output Voltage | 5V |
| Output Current | 3A |
| Output voltage ripple (peak to peak) | ±0.3V |
| Switching Frequency | 400kHz |

(3)

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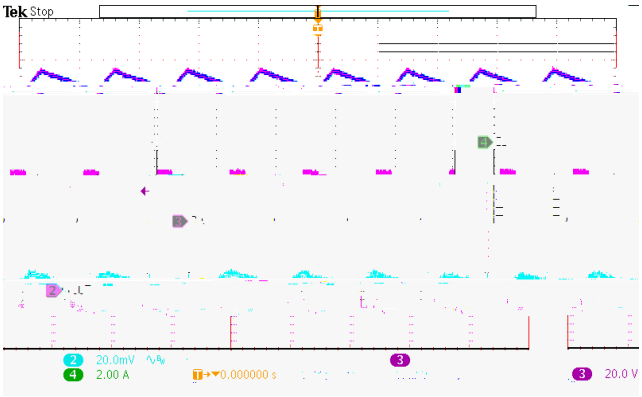



Figure 14. SW node waveform and Output Ripple
VIN=24V, IOUT=3A



Figure 15. SW node Waveform and Output Ripple
VIN=24V, IOUT=10mA

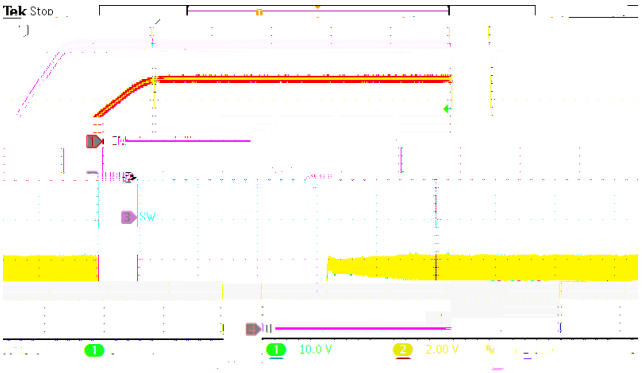



Figure 16. Power Up
VIN=24V, VOUT=5V, IOUT=3A

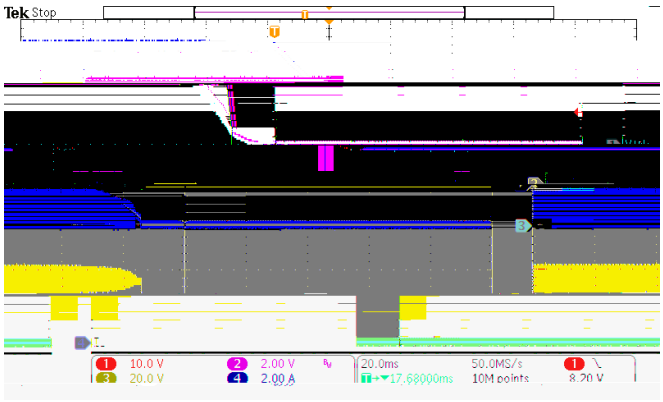



Figure 17. Power Down
VIN=24V, VOUT=5V, IOUT=3A

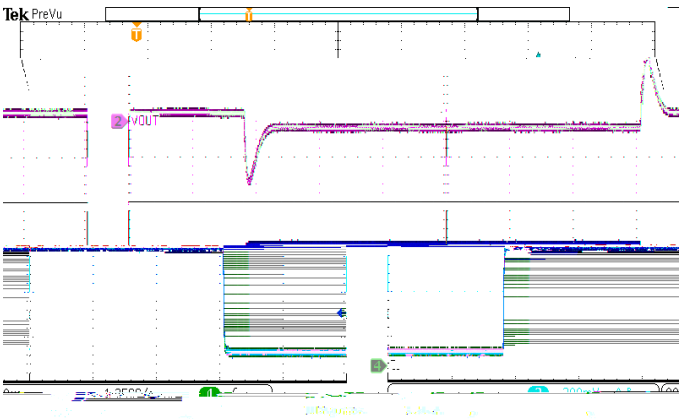



Figure 18. Load Transient
VOUT=5V, IOUT=0.3A to 2.7A, SR=250mA/us

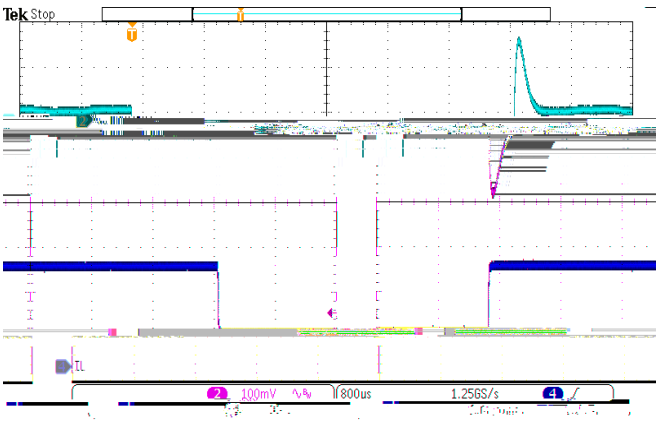
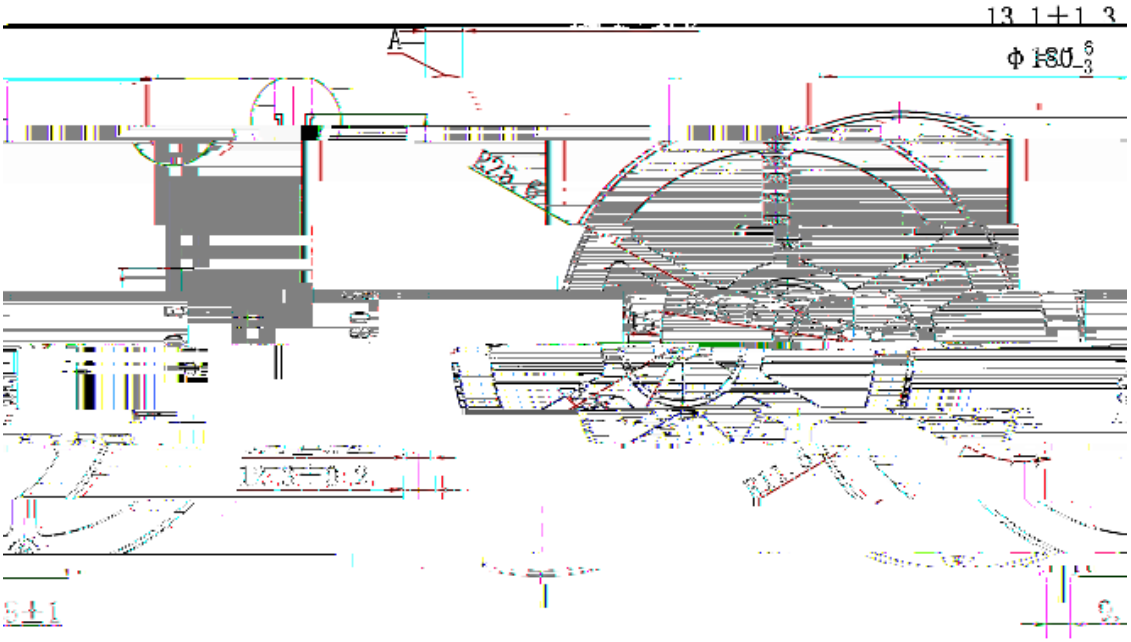
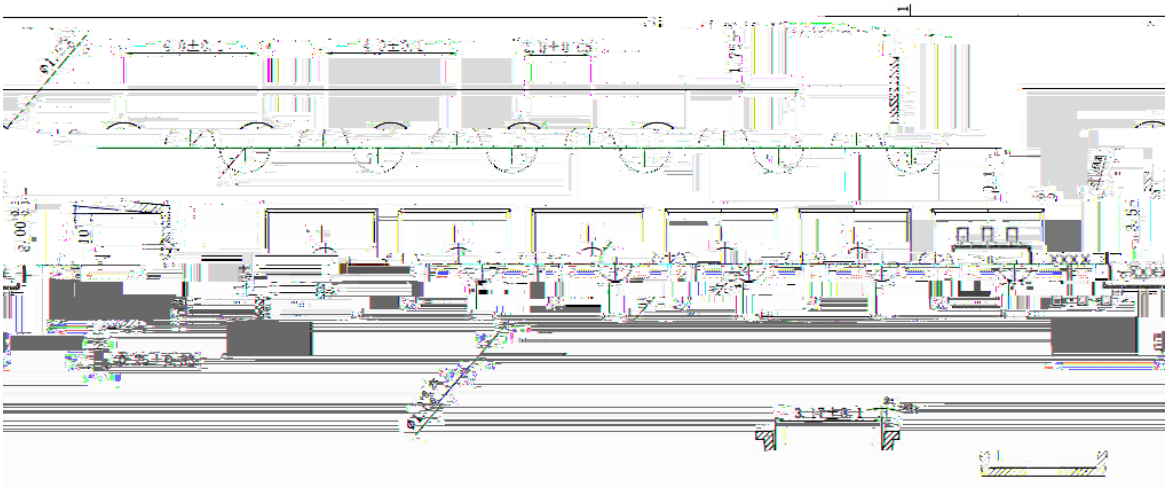



Figure 19. Load Transient
VOUT=5V, IOUT=0.75A to 2.25 A, SR=250mA/us

PACKAGE INFORMATION

TAPE AND REEL INFORMATION





## RELATED PARTS

| PN | DESCRIPTION | COMMENTS |
|---|---|---|
| **SCT2320**<br>**SCT2321** | 3.8V-32V Vin, 2A Synchronous Step-down DCDC Converter with EMI Qq5(n)-9/0(er wit)3(h)-9( 1 591 | |