

General Description

TCS4480 is a Synchronous Buck Circuit with two current sense pins suitable for many multi-output applications. It is designed to allow for operating a wide supply voltage range from 4.5V to 40V. This IC can operate in both Constant Current (CC) and Constant Voltage (CV) modes.

TCS4480 operates as a Buck Circuit providing a wide range of outputs at Constant Voltage (CV) from 4.5V to 40V and the output current as high as 8A or above. It has a Constant Current (CC) mode so that output current can be set externally and at an accuracy of $\pm 4\%$.

The current mode control and external compensation makes feedback control have good line and load regulation with flexible external design.

Pin Configurations

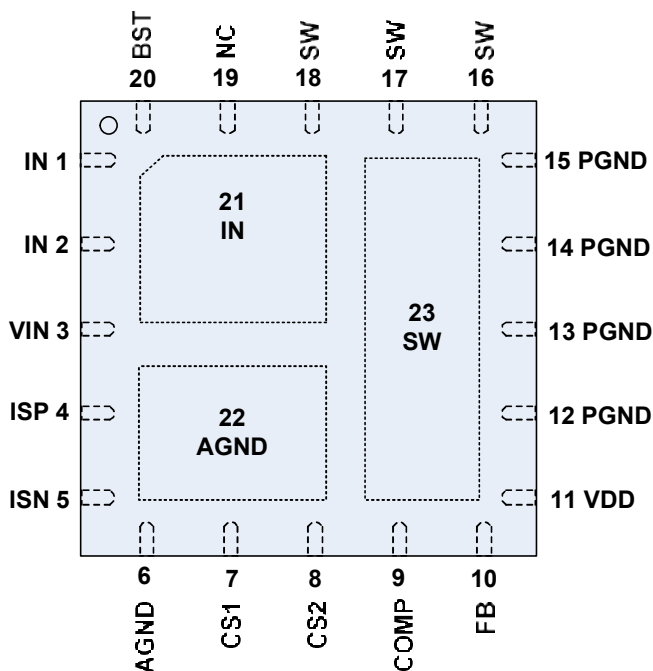


Figure1 Pin Configuration of TCS4480(Top View)

Features

- Vin: 4.5V to 40V
- Vout: 1.2V to $V_{in} \times 99.5\%$; typical at 5V
- Low Dropout Operation: Maximum Duty Cycle at 99.5%
- Precision CC/CV Mode Control
- Burst/PFM Mode for Increased Light Load Efficiency
- 2 outputs independent Constant Current setting
- Hiccup mode when output voltage below 50% normal output voltage
- Protection:
 - NMOS peak current limit: accuracy: $\sim 20\%$
 - Output short protection: reduce input current to less than 20mA (RMS)
 - Output FB OVP (125% VFB), only turn off High side MOS.
 - Temperature shutdown (OTP)
- Adjustable Output Cable Resistance Compensation
- Switching Frequency: $125k \pm 25k$
- Integrated Power MOSFET
- QFN20L Package

Applications

- USB Power Supplies with PD
- High-Brightness Lighting
- General-Purpose DC/DC Application