SINGLE SUPPLY 12V SYNCHRONOUS PWM CONTROLLER

ADVANCE DATA SHEET

DESCRIPTION

The NX2306 controller IC is a compact synchronous Buck controller IC with 8 lead SOIC8 package designed for step down DC to DC converter applications. The NX2306 controller is optimized to convert single supply 12V bus voltage to as low as 0.8V output voltage. Internal UVLO keeps the regulator off until the supply voltage exceeds 9V where internal digital soft starts get initiated to ramp up output.The NX2306 employs loss-less current limiting by sensing the Rdson of synchronous MOSFET followed by HICCUP feature. Other features includes: 12V gate drive capability , Converter Shutdown by pulling OCP pin to gnd, Adaptive dead band control and internal compensation to reduce external components.

FEATURES

- 12V Gate Driver
- Bus voltage operation from 9V to 15V
- Loss-Less Current limit by sensing Rdson of Synchronous MOSFET
- Fixed compensation gain
- Internal 300kHz or 600kHz operation(2306A)
- Internal Digital Soft Start Function
- Adaptive deadband Control
- Shut Down via pulling OCP pin

APPLICATIONS

- Graphic Card on board converters
- Vddq Supply in mother board applications
- On board DC to DC such as 12V to 3.3V, 2.5V or 1.8V
- Set Top Box and LCD Display

TYPICAL APPLICATION

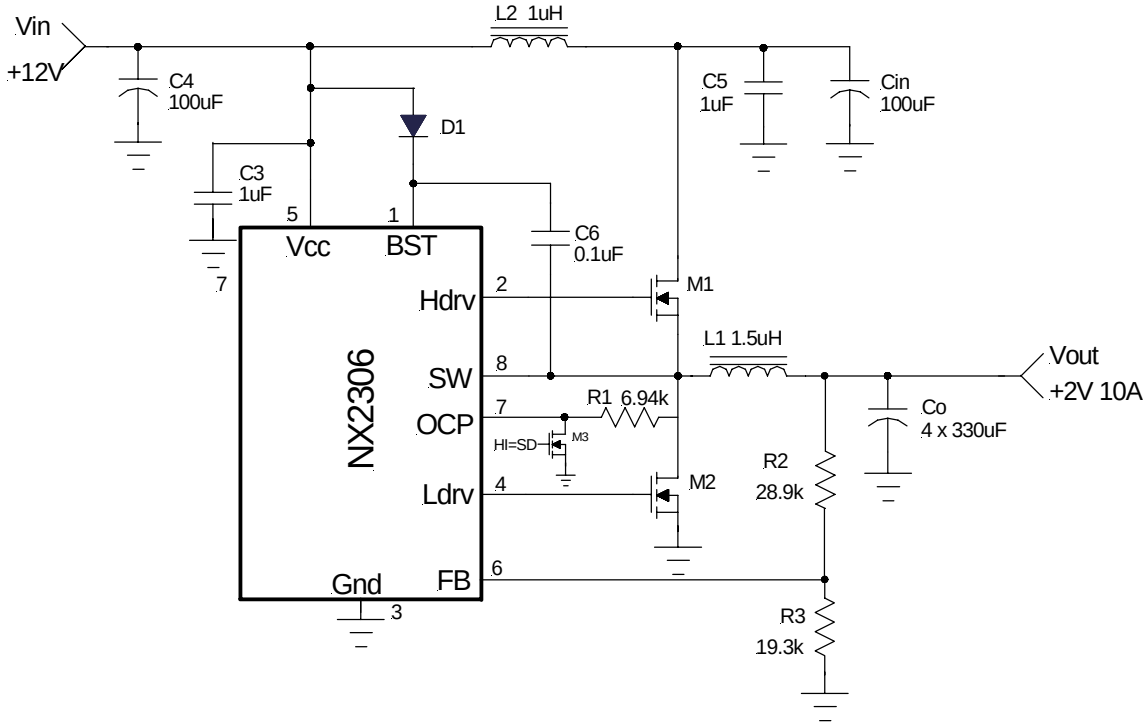

Figure1 - Typical application of NX2306

ORDERING INFORMATION

Device	Temperature	Package	Frequency
NX2306CSTR	0 to 70°C	SOIC-8L	300kHz
NX2306ACSTR	0 to 70°C	SOIC-8L	600kHz