

## 6A Synchronous Step-Down Converter

### DESCRIPTION

The EUP3216 is a synchronous, step-down dc-dc converter capable of providing up to 6A output current employing adaptive on-time valley-current mode. The EUP3216 operates from an input voltage range of 3.3V to 5.5V and provides a regulated output voltage from 0.6V to 2V. The internal synchronous power switch increases efficiency and eliminates the need for an external Schottky diode. The EUP3216 features three switching frequency setting. It can be externally set for forced PWM continuous mode or pulse skipping mode.

The EUP3216 integrates internal soft-start function, droop support, external tracking support, output soft discharge, integrated bootstrap switch, power good function, and enable function. EUP3216 features short circuit and thermal protection circuits to increase system reliability. Externally MODE pin allows for frequency and operation mode choice. The EUP3216 is available in a low profile 20pin 4mmx4mm TQFN package with the exposed pad.

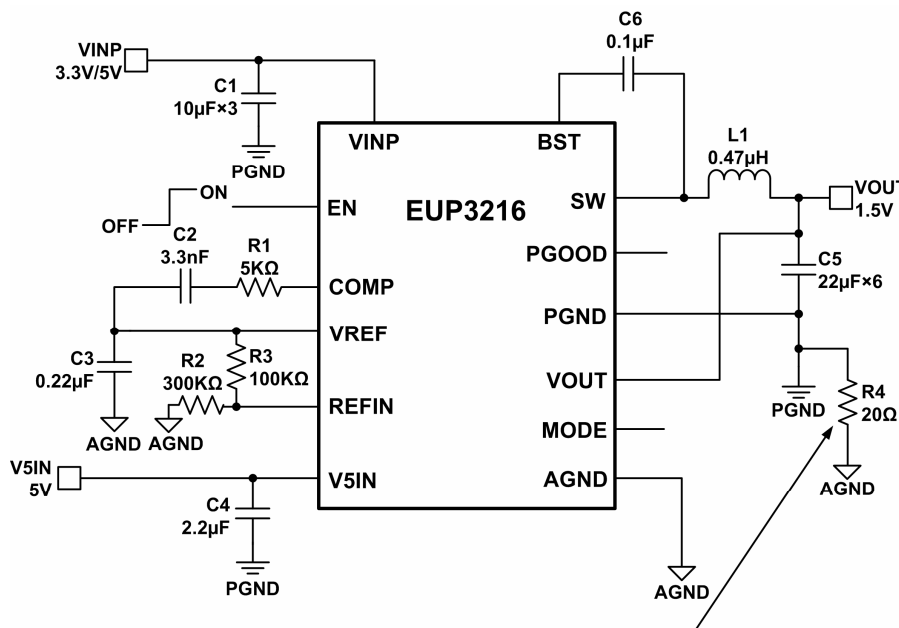
### FEATURES

- 3.3V to 5.5V Power Input Voltage Range
- Minimum External Components Count
- 6A Available Load Current
- 35mΩ Integrated FET Switches
- Selectable 0.8MHz to 1.2MHz Frequency
- PWM Mode and Pulse-Skip Mode
- Integrated complete protection
- Excellent Line and Load Transient Response
- Internal Soft-start with 1.6ms
- Adjustable Output Voltage from 0.6V to 2 V
- Available in 20pin 4mm× 4mm TQFN Package with Exposed Pad
- RoHS Compliant and 100% Lead(Pb)-Free Halogen-Free

### APPLICATIONS

- Distributed 3.3V and 5V Power Supplies
- High Performance DSPs, FPGAs, ASICs and microprocessors
- Base Station, Telecom, and Networking Equipment Power Supplies
- Notebook and Ultrabook

### Typical Application Circuit



NOTE: A resistor of 20~30Ω must be connected between AGND and PGND.

Figure 1.