

# New Product Announcement AP3405

## 600mA Step-down DC-DC Converter with Synchronous Rectifier

The AP3405 is highly integrated with 2.0MHz fixed frequency, current mode, PWM synchronous buck (step-down) DC-DC converter, and is capable of driving a 600mA load with high efficiency and excellent line and load regulation.

The device's high efficiency is easily configured by using external components.

Current mode control provides fast transient response and cycle-by-cycle current limit.

The AP3405 employs complete protection to ensure system security, including Input Undervoltage Lockout, Overtemperature Protection and hiccup mode Short Circuit Protection.

The device is targeted at cellphone, tablet and netbook applications

AP3405 is available in the space saving, industry standard U-DFN2020-8 package.



## The Diodes Advantage

- Synchronous DCDC Buck Converter with Continued Load Current of 600mA
  - High Switching Frequency Operation for small external components
  - Current mode control provides fast transient response
  - Excellent high-efficiency line and load regulation

#### Protection

Cycle-by-cycle current limit, overvoltage protection, undervoltage lock out, overtemperature protection and hiccup mode at short circuit protection.

Package – U-DFN2020-8 Industry standard package

### **Applications**

Cell Phones

- Wearable Devices
- Battery Powered Products

www.diodes.com





## **Typical Application Schematic:**



## **Product Portfolio**

|             |                         |                       |                       |                        |                          |                | ٩  |  | Features   |                             |                     |                              |                         |           |                      |
|-------------|-------------------------|-----------------------|-----------------------|------------------------|--------------------------|----------------|--|--|------------|-----------------------------|---------------------|------------------------------|-------------------------|-----------|----------------------|
| Part Number | Input<br>Voltage<br>(V) | Output Voltage<br>(V) | Output Current<br>(A) | Frequency<br>(kHz) typ | Internal Vref (V)<br>typ | Efficiency (%) | Standby<br>Quiescent<br>Current (µA) typ | Operating<br>Ambient<br>Temp Range<br>(°C) | Enable Pin | Current Limit<br>Protection | Thermal<br>Shutdown | Adjustable<br>Output Voltage | Undervoltage<br>Lockout | Softstart | Packages             |
| AP3429/A    | 2.5~5.5                 | 0.7~5.5               | 2                     | 1000                   | 0.6                      | 95             | 90                                       | -40 to +85                                 | Y          | Y                           | Y                   | Y                            | Y                       | Y         | TSOT25               |
| AP3417C     | 2.5~5.5                 | 0.7~5.5               | 1                     | 1500                   | 0.6                      | 95             | 90                                       | -40 to +85                                 | Y          | Y                           | Y                   | Y                            | Y                       | Y         | TSOT25,<br>DFN2020-8 |
| AP3405      | 2.5~5.5                 | 0.7~5.5               | 0.6                   | 2000                   | 0.6                      | 95             | 35                                       | -40 to +85                                 | Y          | Y                           | Y                   | Y                            | Y                       | Y         | U-DFN2020-8          |

Synchronous Rectified Step up Converter Web page : http://diodes.com/catalog/buck\_converter\_57/

## **Ordering Information**

| Device      | Package     | Identification<br>Code | Reel Size | Quantity |  |  |
|-------------|-------------|------------------------|-----------|----------|--|--|
| AP3405SHE-7 | U-DFN2020-8 | 2V                     | 7"        | 30,00    |  |  |