

## 1MHz, 3A Synchronous Step-Down Regulator

### Features

- High Efficiency: Up to 95%
- 50 $\mu$ A Operating Quiescent Current
- <1 $\mu$ A Shutdown Current
- Internal Soft Start Function
- Output Current :  
 G2822T11U: 2A Continuous, 3A Peak  
 G2822TB1U: 2A Continuous, 3A Peak  
 G2822RC1U: 3A Continuous
- 2.7V to 6.5V Input Voltage Range
- 1MHz Switching Frequency
- No Schottky Diode Required
- 100% Duty Cycle in Dropout Operation
- 0.6V Reference Allows Low Output Voltages
- Over Temperature Protection
- Hiccup Short-Circuit Protection
- Output Discharge
- RoHS Compliant

### Applications

- Cellular Telephones
- Personal Information Appliances
- Microprocessors and DSP Core Supplies
- Wireless and DSL Modems
- Digital Still and Video Cameras
- MP3 Players
- Portable Instruments

### General Description

The G2822 is a high efficiency monolithic synchronous buck regulator using a constant frequency, current mode architecture. Supply current during operation is only 50 $\mu$ A and drops to <1 $\mu$ A in shutdown. The 2.7V to 6.5V input voltage range makes the G2822 ideally suited for single Li-Ion battery-powered applications. 100% duty cycle provides low dropout operation, extending battery run time in portable systems. Switching frequency is internally set at 1MHz, allowing the use of small surface mount inductors and capacitors. The internal synchronous switch increase efficiency and eliminates the need for an external Schottky diode. Built-in soft start function eliminates in-rush current that could damage the system.

### Ordering Information

ORDER NUMBER	MARKING	OUTPUT VOLTAGE	TEMP. RANGE	PACKAGE (Green)
G2822T11U	2822x	Adjustable	-40°C to +85°C	SOT-23-5
G2822TB1U	2822x	Adjustable	-40°C to +85°C	SOT-23-6
G2822RC1U	2822	Adjustable	-40°C to +85°C	TDFN2X2-8

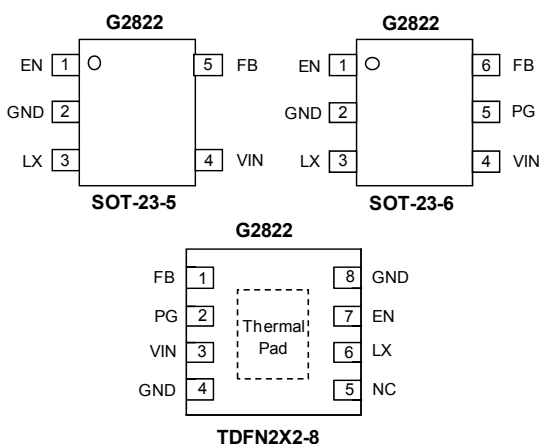
Note: T1: SOT-23-5 TB: SOT-23-6 RC: TDFN2X2-8

1: Bonding Code

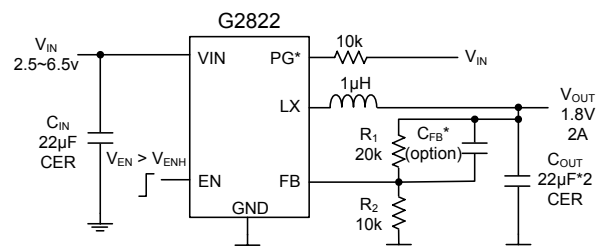
U: Tape & Reel

Green : Lead Free / Halogen Free

### Pin Configuration



### Typical Application Circuit



## 1MHz, 3A Synchronous Step-Down Regulator

### Features

- High Efficiency: Up to 95%
- 40µA Operating Quiescent Current
- <1µA Shutdown Current
- Internal Soft Start Function
- Output Current  
**G2822ATB1U: 2A Continuous, 3A Peak**  
**G2822ARC1U: 3A Continuous**
- 2.7V to 6.5V Input Voltage Range
- 1MHz Switching Frequency
- No Schottky Diode Required
- 100% Duty Cycle in Dropout Operation
- 0.6V Reference Allows Low Output Voltages
- Thermal Shutdown Protection
- Output Short-Circuit Latch-off Protection
- Power Good
- RoHS Compliant

### General Description

The G2822A is a high efficiency monolithic synchronous buck regulator using a constant frequency, current mode architecture. Supply current during operation is only 40µA and drops to <1µA in shutdown. The 2.7V to 6.5V input voltage range makes the G2822A ideally suited for single Li-Ion battery-powered applications. 100% duty cycle provides low dropout operation, extending battery run time in portable systems. Switching frequency is internally set at 1MHz, allowing the use of small surface mount inductors and capacitors. The internal synchronous switch increase efficiency and eliminates the need for an external Schottky diode. Built-in soft start function eliminates in-rush current that could damage the system. Output latch-off operation protects the step-down regulator from damage under short circuit condition.

### Applications

- Cellular Telephones
- Personal Information Appliances
- Microprocessors and DSP Core Supplies
- Wireless and DSL Modems
- Digital Still and Video Cameras
- MP3 Players
- Portable Instruments

### Ordering Information

ORDER NUMBER	MARKING	OUTPUT VOLTAGE	TEMP. RANGE	PACKAGE (Green)
G2822ATB1U	282Ax	Adjustable	-40°C to +85°C	SOT-23-6
G2822ARC1U	282A	Adjustable	-40°C to +85°C	TDFN2X2-8

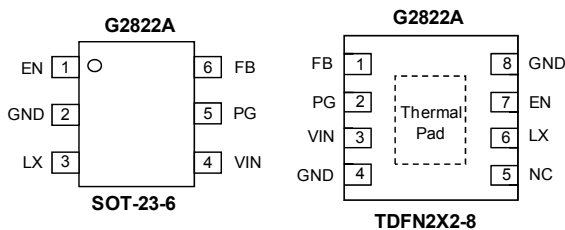
Note: TB: SOT-23-6 RC: TDFN2X2-8

1: Bonding Code

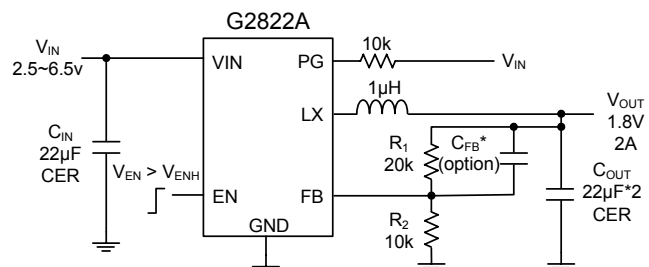
U: Tape & Reel

Green : Lead Free / Halogen Free

### Pin Configuration



### Typical Application Circuit



## 1MHz, 3A Synchronous Step-Down Regulator

### Features

- High Efficiency: Up to 95%
- 50 $\mu$ A Operating Quiescent Current
- <1 $\mu$ A Shutdown Current
- Internal Soft Start Function
- Output Current  
 G2822CTB1U: 2A Continuous, 3A Peak  
 G2822CRC1U: 3A Continuous
- 2.7V to 6.5V Input Voltage Range
- 1MHz Switching Frequency
- No Schottky Diode Required
- 100% Duty Cycle in Dropout Operation
- 0.6V Reference Allows Low Output Voltages
- Thermal Shutdown Protection
- Output Short-Circuit Latch-off Protection
- Output Overvoltage Latch-off Protection
- Power Good
- RoHS Compliant

### General Description

The G2822C is a high efficiency monolithic synchronous buck regulator using a constant frequency, current mode architecture. Supply current during operation is only 50 $\mu$ A and drops to <1 $\mu$ A in shutdown. The 2.7V to 6.5V input voltage range makes the G2822C ideally suited for single Li-Ion battery-powered applications. 100% duty cycle provides low dropout operation, extending battery run time in portable systems. Switching frequency is internally set at 1MHz, allowing the use of small surface mount inductors and capacitors. The internal synchronous switch increase efficiency and eliminates the need for an external Schottky diode. Built-in soft start function eliminates in-rush current that could damage the system. Output latch-off operation protects the step-down regulator from damage under short circuit and overvoltage conditions.

### Applications

- Cellular Telephones
- Personal Information Appliances
- Microprocessors and DSP Core Supplies
- Wireless and DSL Modems
- Digital Still and Video Cameras
- MP3 Players
- Portable Instruments

### Ordering Information

ORDER NUMBER	MARKING	OUTPUT VOLTAGE	TEMP. RANGE	PACKAGE (Green)
G2822CTB1U	282Cx	Adjustable	-40°C to +85°C	SOT-23-6
G2822CRC1U	282C	Adjustable	-40°C to +85°C	TDFN2X2-8

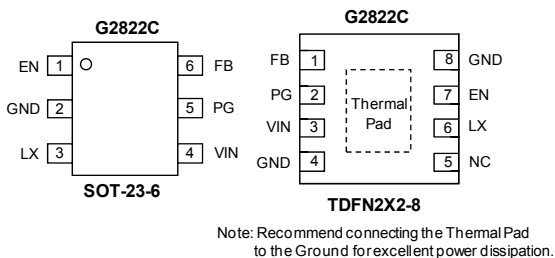
Note: TB: SOT-23-6 RC: TDFN2X2-8

1: Bonding Code

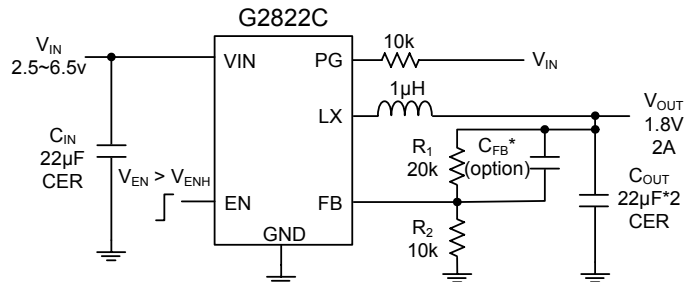
U: Tape & Reel

Green : Lead Free / Halogen Free

### Pin Configuration



### Typical Application Circuit



## 1MHz, 3A Synchronous Step-Down Regulator

### Features

- High Efficiency: Up to 95%
- 50 $\mu$ A Operating Quiescent Current
- <1 $\mu$ A Shutdown Current
- Internal Soft Start Function
- Output Current  
 G2822DTB1U: 2A Continuous, 3A Peak  
 G2822DRC1U: 3A Continuous
- 2.7V to 6.5V Input Voltage Range
- 1MHz Switching Frequency
- No Schottky Diode Required
- 100% Duty Cycle in Dropout Operation
- 0.6V Reference Allows Low Output Voltages
- Thermal Shutdown Protection
- Output Short-Circuit Latch-off Protection
- Output Overvoltage Latch-off Protection
- Power Good
- RoHS Compliant

### General Description

The G2822D is a high efficiency monolithic synchronous buck regulator using a constant frequency, current mode architecture. Supply current during operation is only 50 $\mu$ A and drops to <1 $\mu$ A in shutdown. The 2.7V to 6.5V input voltage range makes the G2822D ideally suited for single Li-Ion battery-powered applications. 100% duty cycle provides low dropout operation, extending battery run time in portable systems. Switching frequency is internally set at 1MHz, allowing the use of small surface mount inductors and capacitors. The internal synchronous switch increase efficiency and eliminates the need for an external Schottky diode. Built-in soft start function eliminates in-rush current that could damage the system. Output latch-off operation protects the step-down regulator from damage under short circuit and overvoltage conditions.

### Applications

- Cellular Telephones
- Personal Information Appliances
- Microprocessors and DSP Core Supplies
- Wireless and DSL Modems
- Digital Still and Video Cameras
- MP3 Players
- Portable Instruments

### Ordering Information

ORDER NUMBER	MARKING	OUTPUT VOLTAGE	TEMP. RANGE	PACKAGE (Green)
G2822DTB1U	282Dx	Adjustable	-40°C to +85°C	SOT-23-6
G2822DRC1U	282D	Adjustable	-40°C to +85°C	TDFN2X2-8

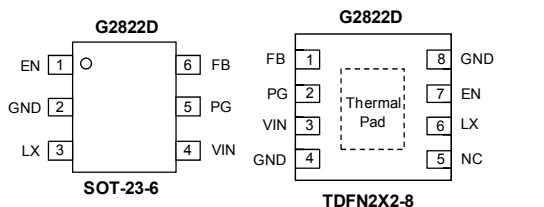
Note: TB: SOT-23-6 RC: TDFN2X2-8

1: Bonding Code

U: Tape & Reel

Green : Lead Free / Halogen Free

### Pin Configuration



### Typical Application Circuit

