

## High Voltage 1.5x Charge Pump with Load Switch Controller

### Features

- Input Range: 8V to 24V
- Output Range: 12V to 36V
- 150μA Quiescent Current at 8V Supply Voltage and 190μA Quiescent Current at 24V Supply Voltage
- ±3% Regulated Output
- Power Good Function
- Power Good of Open Drain (Monitor AC  $V_{IN}$  Only)
- Embedded a 12-V LDO
- 4 Control Signal Inputs
- 4 12V-Drivers for external NMOS switches
- 4 Discharging Networks for 22Ω
- Over-Temperature Protection
- Output Short Circuit Protection
- TQFN3X3-20 Package

### Applications

- Notebook Computers

### General Description

The G5934 is a high-voltage switched-capacitor charge pump that provides the regulated output voltage of 1.5x input voltage. Input voltages ranging from 8V to 24V can be converted into a 12V to 36V output supply. The device is ideal for battery-powered conversion applications in notebook computers with a typical operating current of 150μA at 8V supply and 190μA at 24V supply.

The G5934 has a NMOS open-drain output pin for power good indication. When  $V_{OUT} > 1.5 \times V_{IN} \times 90\%$ , the NMOS will be turned off immediately and PG pin will be pulled high by external resistor.

The G5934 contains an embedded 12-V LDO to provide the supply voltage to the drivers controlled by ON signals. The discharging networks are connected to the 22Ω resistor to shut down the low-voltage system while control input signals ON are not ready.

The G5934 contains an over-temperature circuit to protect the device under continuous output short circuit conditions.

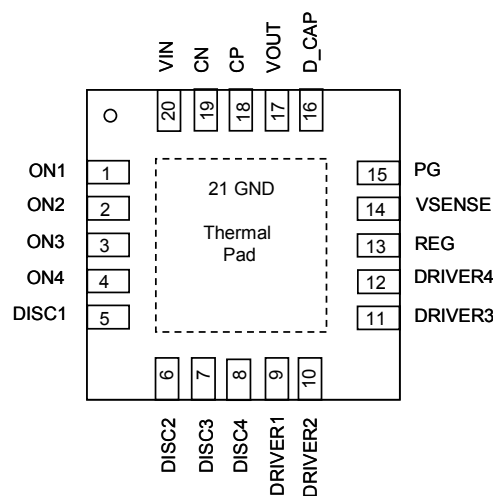
The G5934 is available in TQFN3X3-20 package (thermal pad included).

### Ordering Information

ORDER NUMBER	MARKING	TEMP. RANGE	PACKAGE (Green)
G5934RZ1U	5934	-40°C to +85°C	TQFN3X3-20

Note: RZ: TQFN3X3-20  
1: Bonding Code  
U: Tape & Reel

### Pin Configuration



**TQFN3X3-20**

Note: Recommend connecting the Thermal Pad to the Ground for excellent power dissipation.