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 x V_{IN} x 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.

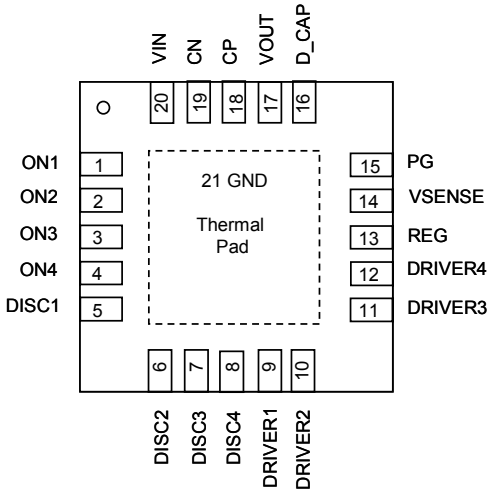
The G5934 is available in TQFN3X3-20 package (thermal pad included).

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.