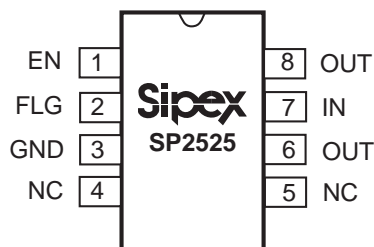# +3.0V to +5.5V USB Power Control Switch

features

- ■ **Compliant to USB Specifications**
- ■ **+3.0V to +5.5V Input Voltage Range**
- ■ **Open Drain Error Flag Output**
- ■ **2.7V Undervoltage Lockout**
- ■ **500mA Minimum Continuous Load Current**
- ■ **1.25A Short Circuit Current Limit**
- ■ **140mΩ Maximum On-Resistance**
- ■ **80μA On-State Supply Current**
- ■ **1μA Shutdown Current**
- ■ **Thermal Shutdown**
- ■ **1ms Soft-Start Power Up**
- ■ **Active-High Version**
  - • SP2525-1
- ■ **Active-Low Version**
  - • SP2525-2

description

The SP2525 device is a single +3.0V to +5.5V USB supervisory power control switch ideal for self-powered and bus-powered Universal Serial Bus (USB) applications. The SP2525 device has low on-resistance (80mΩ typical) and can supply 500mA minimum. The fault currents are limited to 2.0A typical and the flag output pin is available to indicate fault conditions to the USB controller. The 1ms soft start of the SP2525 device will eliminate any momentary voltage drop on the upstream port that may occur when the switch is enabled in bus-powered applications. The thermal shutdown feature will prevent permanent damage to the SP2525 device when subjected to excessive current loads. The under voltage lockout feature will ensure that the SP2525 device will remain off unless there is a valid input voltage present.

P

typical application circuit
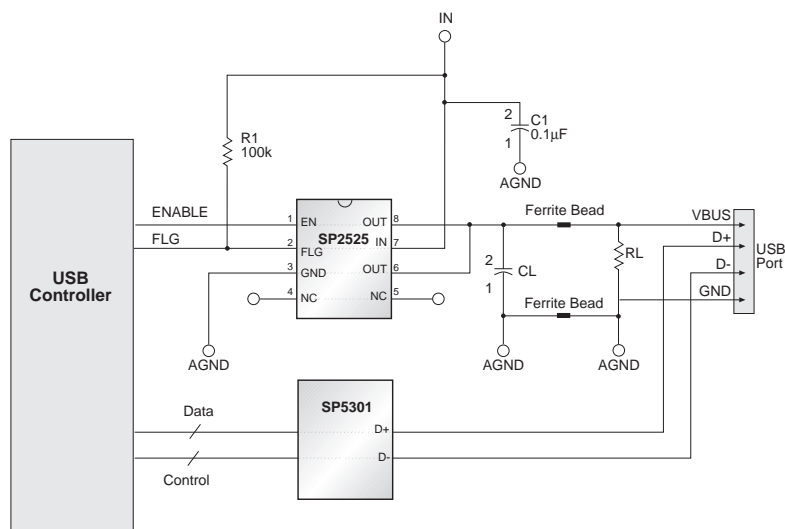
ordering information - *Please consult the factory for pricing and availability on a Tape-On-Reel option.*

Part Number	Temperature Range	Package Type
SP2525-1EN	-40°C to +85°C	8-pin NSOIC
SP2525-2EN	-40°C to +85°C	8-pin NSOIC
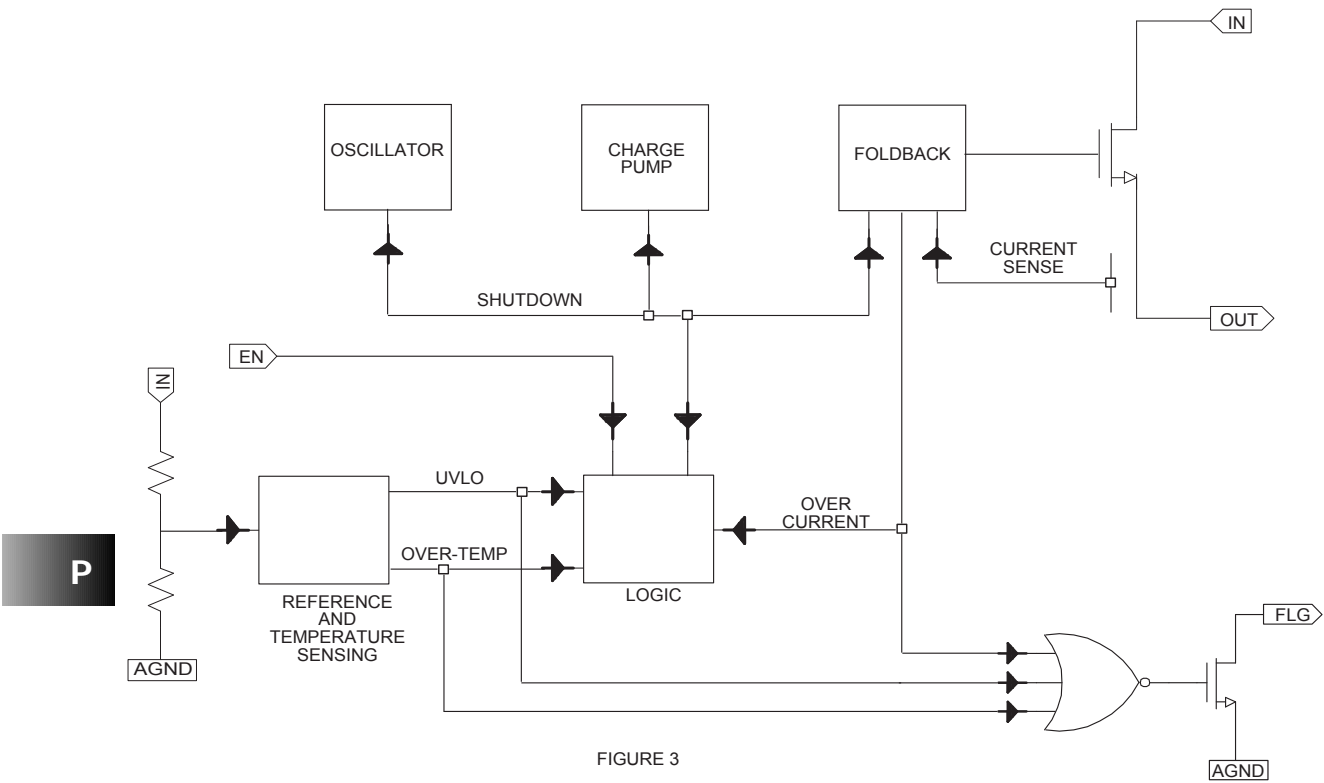
SP2525

FIGURE 3

pin number	name	description
1	EN	Enable Input Active High for the SP2525-1 and Active Low for the SP2525-2.
2	FLG	Fault Flag Output —Active-low, open-drain output. Indicates over-current, UVLO and Thermal Shutdown.
3	GND	Ground Reference —Supply return.
4	NC	No Connection.
5	NC	No Connection.
6, 8	OUT	Switch Output Connect Out Pins Together
7	IN	Supply Voltage (Input)