



Low Power Off-Line Primary Controller

- ADVANCED INFORMATION -

INTRODUCTION

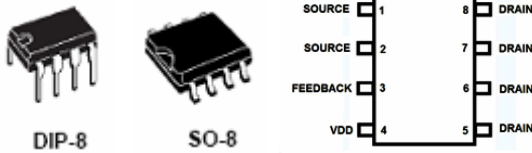
DESCRIPTION

The MN022A is a low power off-line primary switcher that takes advantage of MNI's proprietary 730V X³DMOS-I process. It integrates a dedicated current mode PWM controller with a high voltage power MOSFET in one piece of silicon. It is ideal for low cost consumer supply applications.

MAIN APPLICATIONS

- Off-line power supplies for battery chargers
- Standby power supplies for TV or monitors
- Auxiliary supplies for motor control

PIN/PACKAGE OVERVIEW

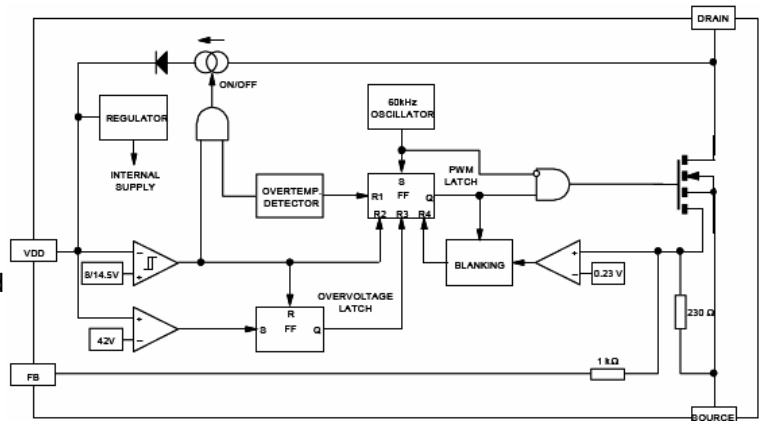


- Source: Internal MOSFET Source & IC Ground
- Drain: Internal MOSFET Drain & Startup Input
- VDD: 9V to 38V Supply Input (with Startup Current Output)
- Feedback: Controls Peak Current Level

FEATURES

- Form and Fit Compatible with ST's Viper Standard
- Automatic Lockouts: Low Vdd, High Vdd, High Current and High Temperature
- Internal High Voltage DMOS
- Automatic Hiccup Mode for Light Loads
- Internal Startup
- Low-Drift 60kHz Switching Frequency
- 100% Avalanche Tested

BLOCK DIAGRAM



SPECIFICATIONS

Symbol	Parameter	Parametric Value	Units
ABSOLUTE MAXIMUM RATINGS (Tc = 25°C unless otherwise specified)			
V _{DS}	Drain-Source Voltage (25°C to 125°C)	730	V
I _{FB}	Feedback Current	3	mA
V _{DD}	Supply Voltage	50	V
T _{CASE}	Case Temperature	-40 to +150	°C
T _{STORAGE}	Storage Temperature	-55 to +150	°C
TYPICAL SPECIFICATIONS (Tc = 25°C)			
R _{on}	Switching DMOS On-resistance	15	Ω
T _{fall}	Switching DMOS Fall-time	100	ns
T _{rise}	Switching DMOS Rise-Time	50	ns
T _{on min}	Minimum On-time	700	ns
R _{feedback}	Feedback Pin Input Resitance	1.20	KΩ