**July 2004** 

# **Smart Power Supply Solution**

**3rd Issue** 

# Off Line Primary Switch Viper53

### Introduction

Viper53 combines an enhanced current-mode PWM controller and a high-voltage MDMesh power MOSFET in a single package. It is integrated with over-temperature protection, overload and short circuit control.

Besides having automatic burst mode in standby condition, with up to 300KHZ frequency Viper53 can make SMPS fit Energy Star program with more reliability and fewer external components in less space.



# **General description:**

The new Viper53 has been developed to meet both the increasing demand for power and the ever decreasing size of Set-top boxes, DVDs and LCD monitors. Housed in DIP-8 and Power SO-10, the Viper53 does not require a heat sink and can manage up to 40W of output power with 85-265 Vac input voltage.

# **Main applications**

DVDs, LCD monitors, Set top box, PDP Auxiliary, PC Standby, SMPS Standby, Adapter, etc.



#### **Main Features:**

- Switch Frequency up to 300 kHz
- Current Limitation
- Current Mode Control with Adjustable Limitation
- Rds(on) 1 Ohm

#### **Benefits:**

- High performance vs price ratio
- Special design for overload control which makes low requirements for transformer.
- Very low Rdson with ST Patent MDMesh MOS makes Viper53 provide better thermal parameter without heat sink comparing to same power level SMPS.

# **Viper53 Parameters:**

Device Type	European 195~265W	US/wide R 85~265 V
DIP-8	50W	30W
Power SO-10	65W	40W

Note: Above power capabilities are given under adequate thermal conditions

### Packages:





DIP-8

PowerSO-101%

For more information or sample request, please contact your local marketing, or visit our web site <a href="http://www.st.com">http://www.st.com</a>

Written By: Jodie Wang / Tracy Wang Regional Product Marketing **Transistors Group** 



HK/CHINA: Desmond Chan (852) 2861 5700 ext 5743 Taiwan: Robert Yu (886-2) 2378 8088 ext 6305 SAP : Michael Cheong (65) 6216 5000 ext 5357 Korea : HM Kim (82-2) 3489 0114 ext 5143