

vr18-33-50 - 1.8V to 3.3V Step-Up Voltage regulator

FEATURES

- 3.3V output
- 50mA maximum Load current
- Overload protection through current limiting
- Disable mode allowing external 3.3v Supply
- Suspend mode (IDD max. 75uA)
- Vin = 1.62V...1.95V
- External capacitor 1uF or higher (Ceramic)

APPLICATIONS

On chip voltage regulation for analog or digital circuits requiring 3.3V operating voltage in 1.8v systems.

TECHNOLOGY: 0.18um single Poly, 5 Metal,
Low Leakage, CMOS Process

OVERVIEW

The cell is a switched-capacitor step-up voltage doubler, with 50mA load current capability. Only one external floating capacitor of 33nF and the output capacitor is required. It can be used in synchronous mode with an external 5Mhz clock or in asynchronous mode but with limited load current capability. An output voltage detector will cause the chargepump to automatically stop pumping once the output voltage exceeds approximately 3.2 Volt. This achieves quiescent current when the circuit is in standby.

FUNCTIONAL DIAGRAM

