Product Overview

NCP1253: PWM Controller, Current Mode, for Offline Power Supplies

For complete documentation, see the data sheet

Product Description

The NCP1253 is a highly integrated PWM controller capable of delivering a rugged and high performance offline power supply in a tiny TSOP-6 package. With a supply range up to 28 V, the controller hosts a jittered 65 kHz or 100 kHz switching circuitry operated in peak current mode control. When the power on the secondary side starts to decrease, the controller automatically folds back it's switching frequency down to a minimum level of 26 kHz. As the power further goes down, the part enters skip cycle while limiting the peak current. To avoid sub harmonic oscillations in CCM operation, adjustable slope compensation is available via the series inclusion of a simple resistor in the current sense signal. Besides the auto-recovery timer-based short-circuit protection, an Over Voltage Protection on the Vcc pin protects the whole circuitry in case of optocoupler destruction or adverse open loop operation.

Features

- Frequency Foldback down to 26 kHz and Skip-Cycle in Light Load
- Internal Ramp Compensation
- Frequency Jittering in Normal and Frequency Foldback modes
- Over Voltage Protection (OVP) monitoring on the Vcc pin
- Timer-based Auto-Recovery or Latched Short-Circuit Protection

Benefits

- Improved efficiency across the load range
- Reduces the number of external components
- Low EMI signature
- Protects against output over voltage conditions without any added components
- Protection against fault conditions

Applications

- Offline Adapters
- AC-DC converters

End Products

- Set-top Boxes
- Printers
- Notebooks and Netbooks

Part Electrical Specifications

Product	Compliance	Status	Topology	Control Mode	f_{sw} Typ (kHz)	Stand-by Mode	UVLO (V)	Short Circuit Protection	Latch	Soft Start	V_{CC} Max (V)	Drive Cap. (mA)	Package Type
NCP1253ASN100T1G	Pb-free Halide free	Active	Flyback	Current Mode	100	Yes	8.8	Yes	Yes	Yes	28	300 / 500	TSOP-6
NCP1253ASN65T1G	Pb-free Halide free	Active	Flyback	Current Mode	65	Yes	8.8	Yes	Yes	Yes	28	300 / 500	TSOP-6
NCP1253BSN100T1G	Pb-free Halide free	Active	Flyback	Current Mode	100	Yes	8.8	Yes	No	Yes	28	300 / 500	TSOP-6
NCP1253BSN65T1G	Pb-free Halide free	Active	Flyback	Current Mode	65	Yes	8.8	Yes	No	Yes	28	300 / 500	TSOP-6

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