



NCP12400A65WGEVB: Fixed Frequency Current Mode Controller for Flyback Converters

The NCP12400A65WGEVB Evaluation Board is a new fixed-frequency current-mode controller featuring the Dynamic Self-Supply. This function greatly simplifies the design of the auxiliary supply and the VCC capacitor by activating the internal startup current source to supply the controller during start-up, transients, latch, stand-by etc. This device contains a special HV detector which detects the application unplug from the ac input line and triggers the X2 discharge current. This HV structure allows the brown-out detection as well. It features a timer-based fault detection that ensures the detection of overload and an adjustable compensation to help keep the maximum power independent of the input voltage. Due to frequency foldback, the controller exhibits excellent efficiency in light load condition while still achieving very low standby power consumption. Internal frequency jittering, ramp compensation, and a versatile latch input make this controller an excellent candidate for the robust power supply designs. A dedicated Off Mode allows to reach the extremely low no load input power consumption via "sleeping" whole device and thus minimize the power consumption of the control circuitry. In addition, the NCP12400A65WGEVB features a quiet skip mode which lockes the skip frequency below audible range. This feature greatly reduces audible noise caused by the switching pulses during skip mode.



Features and Applications

- Features
- 10 ms Soft-Start
 - Frequency Foldback then Skip Mode for Maximum Performance in Light Load and Standby Condition
 - Frequency Modulation for Softened EMI Signature
 - Average Efficiency > 88 %
 - No-Load Power Consumption < 75 mW
 - Fixed-Frequency Current-Mode Operation

Evaluation/Development Tool Information

Product	Status	Compliance	Short Description	Parts Used	Action
NCP12400A65WGEVB	Active	Pb-free	Fixed Frequency Current Mode Controller for Flyback Converters	NCP12400BAHAB0DR2G	» Contact Local Sales Office

Technical Documents

Type	Document Title	Document ID/Size	Rev
Eval Board: Schematic	NCP12400A65WGEVB Schematic	NCP12400A65WGEVB_Schematic - 98 KB	0
Eval Board: Test Procedure	NCP12400A65WGEVB Test Procedure	NCP12400A65WGEVB_Test_Procedure - 253 KB	0
Eval Board: Gerber	NCP12400A65WGEVB Gerber Layout Files (Zip Format)	NCP12400A65WGEVB_Gerber.zip - 46 KB	0
Eval Board: BOM	NCP12400A65WGEVB Bill of Matrerials (ROHS Compliant)	NCP12400A65WGEVB_BOM_ROHS - 210 KB	0

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