In eg a ed D i e and MOSFET

The NCP81081 integrates a MOSFET driver, high-side MOSFET and low-side MOSFET into a 6 mm x 6 mm 40-pin QFN package. The driver and MOSFETs have been optimized for high-current DC-DC buck power conversion applications. The NCP81081 integrated solution greatly reduces package parasitics and board space compared to a discrete component solution.

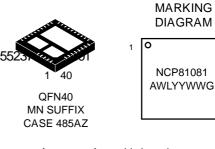
Features

• Capable of Switching Frequencies Up to 1 17Hz/F1 1 Tf12 0 0 12 598111 552



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- A = Assembly Location WL = Wafer Lot YY = Year
- WW = Work Week

G

- = Pb-Free Package
- = FD-Flee Fackage

• These are Pb–Free Devices

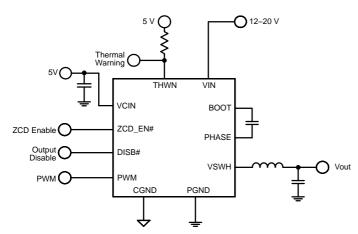


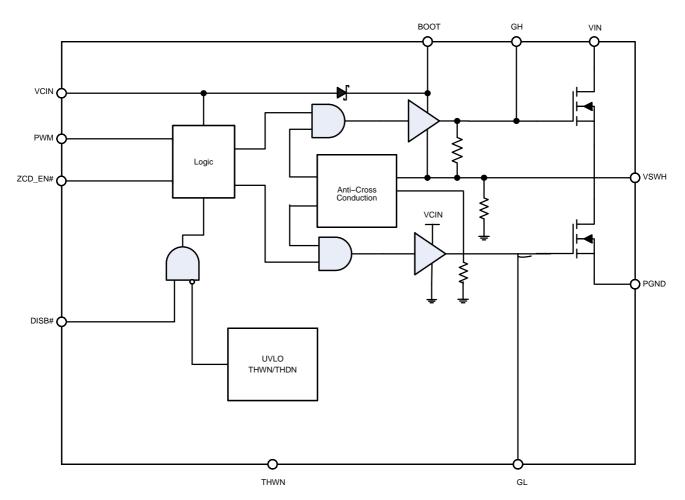
Figure 1. Application Schematic

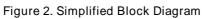
ORDERING INFORMATION

Device	Package	Shipping [†]
NCP81081MNR2G	QFN40 (Pb–Free)	2500/Tape & Reel

+For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification Brochure, BRD8011/D.

NCP81081





NCP81081

ELECTRICAL CHARACTERISTICS (Note 1) (VCIN = 5 V, VIN = 12 V, T _A = -10°C to +100°C, unless other	wise noted)
	moo motoa)

Parameter	Symbol	Condition	Min	Тур	Max	Unit		
SUPPLY CURRENT								
VCIN Current (normal mode)	-	DISB# = 5 V, PWM = OSC, FSW = 400 kHz		14	20			

NCP81081

APPLICATIONS INFORMATION

Theory of Operation

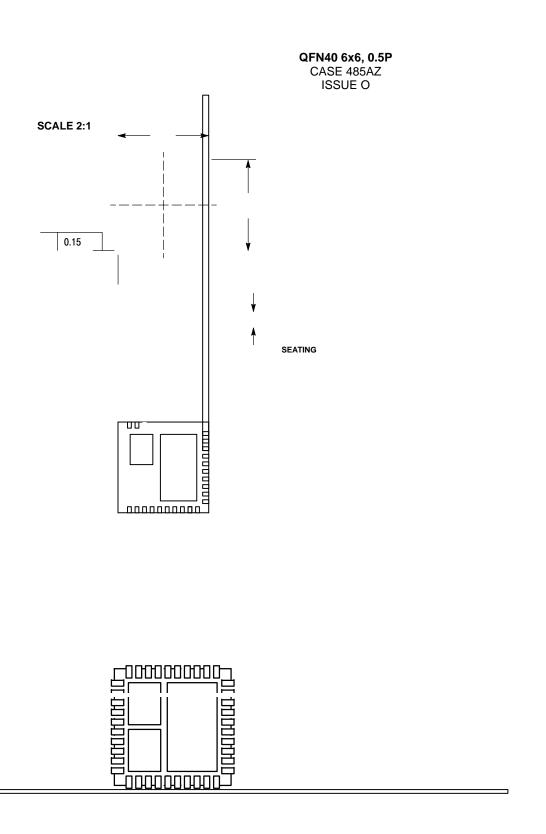
The NCP81081 is an integrated driver and MOSFET module designed for use in a synchronous buck converter topology. A single PWM input signal is all that is required to properly drive the high–side and low–side MOSFETs.

Low Side Driver

The low-side driver is designed to drive a ground-referenced low $R_{DS(on)}$ N-Channel MOSFET. The voltage rail for the low-side driver is internally connected to VCIN and PGND.

High Side Driver

The high–side driver is designed to drive a floating low RDS(on) N– $\,$



DATE 09 JAN 2009

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