

## 产品概览

### NCP43080: 同步整流器控制器，带 LLD 功能

欲看完整文档，请参阅数据表。

NCP43080 是一款用于开关模式电源的同步整流器控制器。该控制器可实现反激、准谐振反激和 LLC 拓扑结构的高能效设计。外部可调节最短开关时间间隔时段提供了驱动各种 MOSFET 封装类型和 PCB 布局的灵活性。SR 系统的可靠低噪音运行由于自同步功能而得以保证。NCP4308 还利用驱动器到 MOSFET 的开尔文联接实现了满载下的高能效运行。该驱动器精确的关断阈值、极低的关断延迟时间和高接受电流功能可实现最长的同步整流 MOSFET 导通时间。该高准确性驱动器和 5V 门极箝位使其非常适用于直接驱动 GaN 器件。为了提供 PCB 布局方面的更大灵活性，此产品有两种版本。NCP4308 没有 LLD 功能，NCP43080 有 LLD 功能

#### 特性

- Self-Contained Control of Synchronous Rectifier in CCM, DCM and QR for Flyback or LLC Applications
  - Precise True Secondary Zero Current Detection
  - Rugged Current Sense Pin (up to 150 V)
  - Adjustable Minimum ON-Time
  - Adjustable Minimum OFF-Time with Ringing Detection
  - Adjustable Maximum ON-Time for CCM Controlling of Primary QR Controller
  - Operating Voltage Range up to  $V_{CC} = 35\text{ V}$
  - 8 A / 4 A Peak Current Sink / Source Drive Capability
  - GaN Transistor Driving Capability (options A and C)
  - Low Startup Current Consumption
- For more features, see the data sheet

#### 优势

- Robust design during power excursion
- Provides negligible switching losses and prolongs FET life
- Robustness
- Improves efficiency and design flexibility
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- Advantage with multiple  $V_{out}$  such as smart charging or USB-PD
- higher drive strength provides higher efficiency
- GaN FET further improve efficiency and solution size
- Improves standby power consumption

#### 应用

- Notebook Adapters
- High Power Density AC/DC Power Supplies (Cell Phone Chargers)
- LCD TVs
- All SMPS with High Efficiency Requirements
- SR for Flyback & LLC

#### 终端产品

- Notebook Adapters
- Smartphone Chargers
- Tablet Chargers
- AC-DC Power Adapters
- LCD TVs

#### 器件电气规格

产品	Pricing (\$/Unit)	Compliance	Status	$V_{CC}$ Max (V)	$V_{ref}$ Typ (V)	$I_{CC}$ Max (A)	$T_A$ Min (°C)	$T_A$ Max (°C)	Package Type
NCP43080ADR2G	0.2933	Pb-free Halide free	Active	37	N/A	0.0056	-40	125	SOIC-8
NCP43080AMTTWG	0.32	Pb-free Halide free	Active	37	N/A	0.0056	-40	125	WDFN-8
NCP43080DDR2G	0.2933	Pb-free Halide free	Active	37	N/A	0.0056	-40	125	SOIC-8
NCP43080DMNTWG	0.3467	Pb-free Halide free	Active	37	N/A	0.0056	-40	125	DFN-8
NCP43080DMTTWG	0.32	Pb-free Halide free	Active	37	N/A	0.0056	-40	125	WDFN-8
NCP43080QDR2G		Pb-free Halide free	Product Preview	37	N/A	0.0056	-40	125	SOIC-8

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