

## 产品简介

# GaN EiceDRIVER™ 系列

## 用于高压GaN开关的单通道隔离栅极驱动器IC

CoolGaN™ e-mode HEMT在英飞凌EiceDRIVER™ IC系列的1EDF5673K, 1EDF5673F和1EDS5663H的驱动下能取得最佳效果。它们可确保稳定高效的高压GaN开关操作, 同时最大限度地减少研发投入, 缩短产品上市时间。

### 使用GaN EiceDRIVER™系列进行设计的主要优势

#### 正负栅极驱动电流:

- › 快速导通/关断GaN开关转换速度

#### 在断相期间, 将栅极电压保持在零位:

- › 避免GaN开关误导通
- › 减少高达50%的死区时间损失

#### 可配置且恒定的GaN开关转换速率, 跨越宽范围的开关频率和占空比:

- › 稳健且高效的SMPS设计
- › 缩短产品上市时间

#### 集成电隔离:

- › 硬开关应用中的稳健操作
- › 可以达到加强(安全)隔离标准

### GaN EiceDRIVER™ IC评估环境

高频(1 MHz)半桥评估板EVAL\_1EDF\_G1\_HB\_GAN

#### 关键元件:

- › GaN开关: 2x CoolGaN™ 600 V e-mode HEMTs (IGOT60R070D1)
- › GaN驱动器: 2x GaN EiceDRIVER™ (1EDF5673K)

订购代码: EVAL\_1EDF\_G1\_HB\_GAN\*

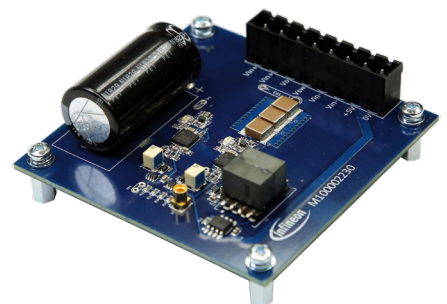
\*即将发布

### 关键用例

- › 图腾柱PFC
- › Vienna整流器
- › 多级拓扑
- › 谐振LLC

### 关键性能

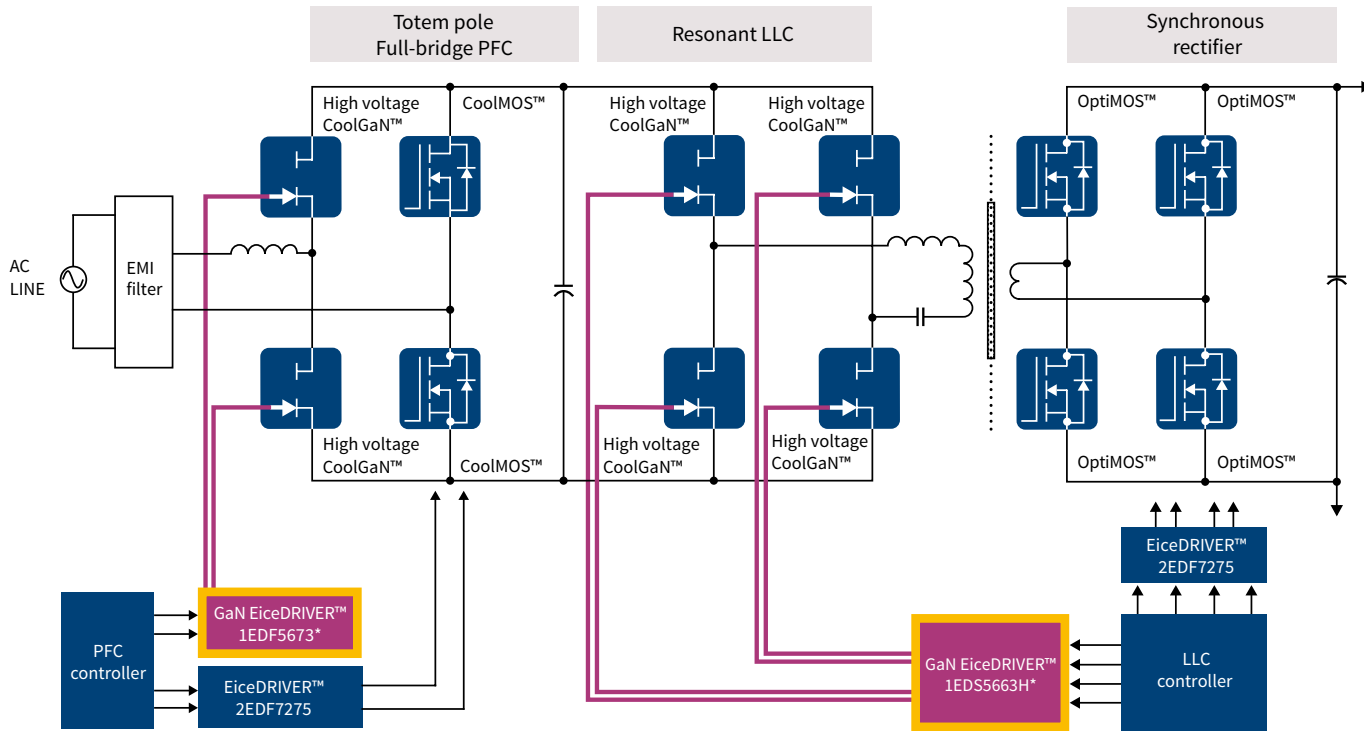
- › 低阻抗输出:
  - 拉电流: 0.85 Ω
  - 灌电流: 0.35 Ω
- › 单通道电隔离:
  - 功能隔离:  $V_{IO} = 1500 V_{DC}$
  - $V_{IOWM} = 510 V_{rms}$  (16-引脚 DSO)
  - $V_{IOWM} = 460 V_{rms}$  (LGA 5x5)
  - 加强隔离:  $V_{IOTM} = 8000 V_{pk}$   
(VDE 0884-10审核中)
  - $V_{IOWM} = 1420 V_{DC}$
  - CMTI最小值: 200 V/ns
- › 时长:
  - 最小输出脉冲宽度: 18 ns
  - 输出传输延迟精度: 13 ns



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高功率SMPS应用示例



\*GaN EiceDRIVER™ ICs are single-channel products

### 产品组合

			
封装	13-引脚 LGA 5x5 mm	16-引脚 DSO 150 mil	16-引脚 DSO 300 mil
产品	1EDF5673K*	1EDF5673F	1EDS5663H
OPN	1EDF5673KXUMA1	1EDF5673FXUMA1	1EDS5663HXUMA1
隔离 (输入至输出)	$V_{IO} = 1500 V_{DC}$	$V_{IO} = 1500 V_{DC}$	$V_{IO} = 8000 V_{pk}$ (VDE0884-10审核中)
灌/拉电流输出电阻	0.85 Ω/0.35 Ω	0.85 Ω/0.35 Ω	0.85 Ω/0.35 Ω
UVLO	4.5 V / 5.0 V	4.5 V / 5.0 V	4.5 V / 5.0 V

\*即将发布

[www.infineon.com/gan-eicedriver](http://www.infineon.com/gan-eicedriver)

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