## 描述/Description

- XNS06S82F6基于Trench FS-IGBT技术，是一款先进的DIP24 IPM，为交流感应、直流无刷电机和PMSM电机提供非常全面的高性能逆变器输出平台。

  XNS06S82F6 is an Advanced DIP24 IPM Based on Trench FS-IGBT Technology, Providing a Fully-featured, High-performance Inverter Output Stage for AC Induction, BLDC, and PMSM Motors.
- XNS06S82F6综合优化了IGBT的栅极驱动以最小化电磁干扰和能量损耗，同时也提供多重保护特性，包括集成欠压闭锁、过流保护、温度检测和故障报告。

  XNS06S82F6 Optimized Gate Drive of the Built-in IGBTs to Minimize EMI and Losses, while also Providing Multiple Protection Features Including Under-voltage Lockouts, Over-current Shutdown, Thermal Monitoring, Fault Reporting.
- XNS06S82F6内置高速HVIC，提供无光耦单电源IGBT栅极驱动能力，进一步减小了逆变器系统设计的总体尺寸。

  XNS06S82F6 Combines High Speed HVIC Provides Opto-Coupler-Less Single-Supply IGBT Gate Driving Capability that Further Reduce the Overall Size of the Inverter System Design.
- 独立的IGBT负端在每个相位均有效，可支持大量不同种类的控制算法。

  Separate Negative IGBT Terminals are Available for Each Phase to Support the Widest Variety of Control Algorithms.

## 主要特点

- 600V-6 A三相IGBT逆变器，包含栅极驱动和保护的控制IC
- 低损耗、短路额定的IGBT
- 内置带限流电阻的自举二极管
- 低端IGBT的独立发射极开路引脚用于三相电流感测
- 内置负温度系数的电阻用于温度检测
- 全包封DIP24封装
- 绝缘级别2000$V_{rms}$/1min
- 单接地电源供电
- 无铅工艺；符合ROHS

## Features

- 600V-6A 3-Phase IGBT Inverter Bridge Including Control ICs for Gate Driving and Protection
- Low-Loss, Short-Circuit Rated IGBTs
- Built-In Bootstrap Diodes with Current Limiting Resistor
- Separate Open-Emitter Pins from Low-Side IGBTs for Three-Phase Current Sensing
- Built-In NTC Thermistor for Temperature Monitorin
- Compact DIP24 Package
- Isolation Rating: 2000 $V_{rms}$/min
- Single-Grounded Power Supply
- Lead-free Terminal Plating; RoHS Compliant

## 应用

- 运动控制 – 家用设备 / 工业电机

## Applications

- Motion Control – Home Appliance / Industrial Motor

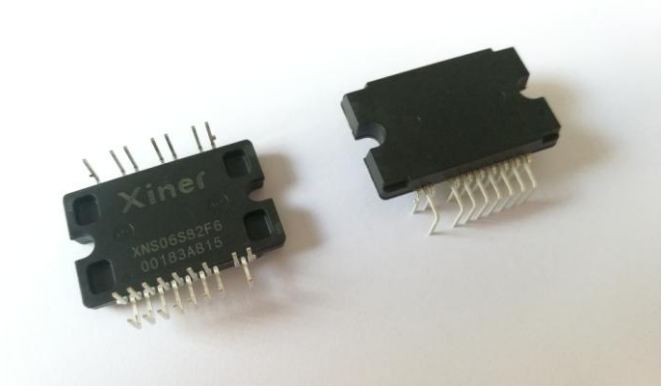
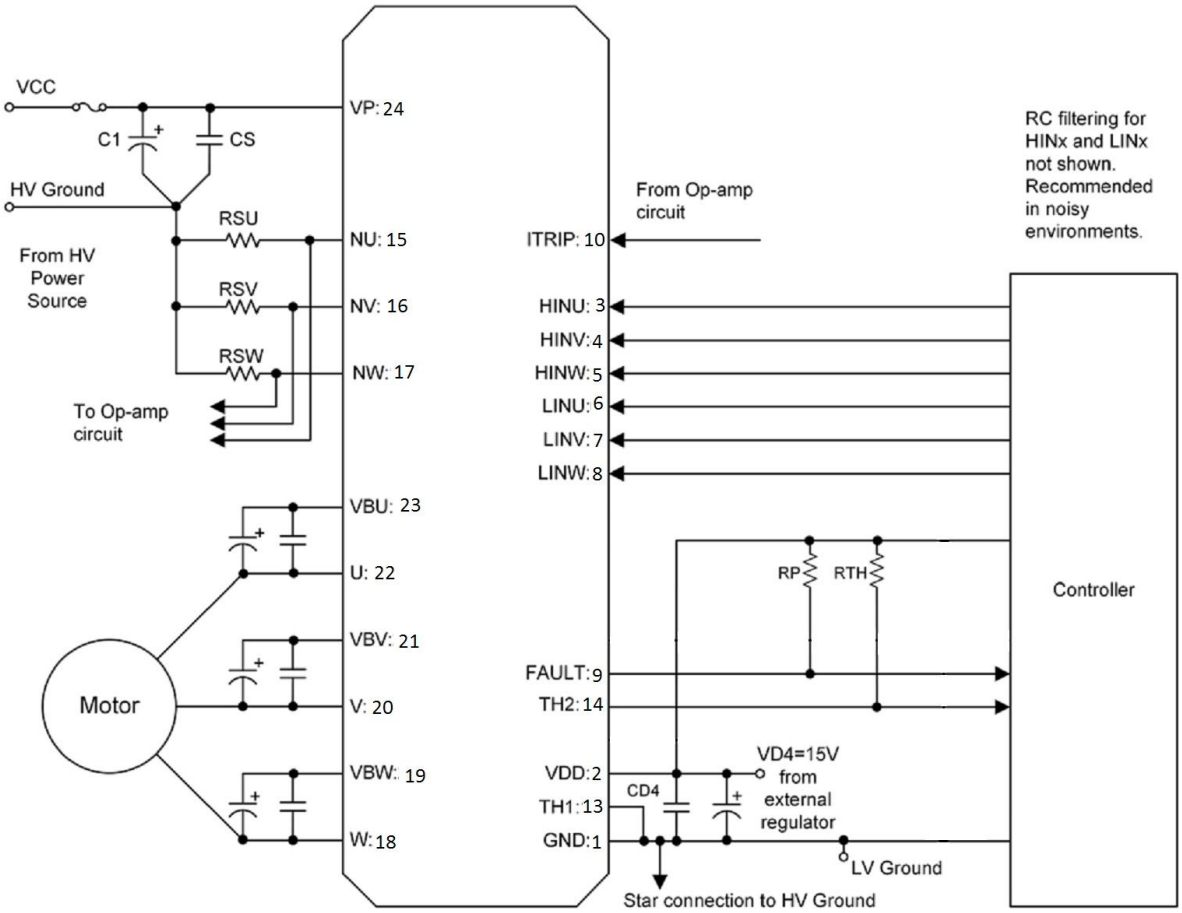



**图1. 封装概览**

**Figure1. Package Overview**

| 引脚号/Pin Number | 引脚名/Pin Name | 引脚描述/Pin Description |
|---|---|---|
| 1 | GND | Common Supply Ground<br>下桥臂参考地端 |
| 2 | VDD | Common Bias Voltage for IC and IGBTs Driver<br>控制电源正端 |
| 3 | HINU | Signal Input for High-Side U Phase<br>上半桥U相逻辑输入端 |
| 4 | HINV | Signal Input for High-Side V Phase<br>上半桥V相逻辑输入端 |
| 5 | HINW | Signal Input for High-Side W Phase<br>上半桥W相逻辑输入端 |
| 6 | LINU | Signal Input for Low-Side U Phase<br>下桥臂U相逻辑输入端 |
| 7 | LINV | Signal Input for Low-Side V Phase<br>下桥臂V相逻辑输入端 |
| 8 | LINW | Signal Input for Low-Side W Phase<br>下桥臂W相逻辑输入端 |
| 9 | FAULT | Fault Output<br>故障信号输出端 |
| 10 | ITRIP | Capacitor for Short-Circuit Current Detector Input<br>过流电流保护电压检测端 |
| 11 | NC | No connection<br>空引脚 |
| 12 | NC | No connection<br>空引脚 |
| 13 | TH1 | 热敏电阻输出端子1<br>NTC Output1 |
| 14 | TH2 | 热敏电阻输出端子2<br>NTC Output2 |
| 15 | NU | Negative DC-Link Input for U-Phase<br>逆变器直流电源负端（U相） |
| 16 | NV | Negative DC-Link Input for V-Phase<br>逆变器直流电源负端（V相） |
| 17 | NW | Negative DC-Link Input for W-Phase<br>逆变器直流电源负端（W相） |
| 18 | W | Output for W-Phase<br>逆变器W相输出端 |
| 19 | VBW | High-Side Bias Voltage for W-Phase IGBT Driving<br>上桥臂W相驱动正端 |
| 20 | V | Output for V-Phase<br>逆变器V相输出端 |
| 21 | VBV | High-Side Bias Voltage for V-Phase IGBT Driving<br>上桥臂V相驱动正端 |
| 22 | U | Output for U-Phase<br>逆变器U相输出端 |
| 23 | VBU | High-Side Bias Voltage for U-Phase IGBT Driving<br>上桥臂U相驱动正端 |
| 24 | VP | Positive DC-Link Input<br>逆变器直流电压正端 |




**Typical Application Circuit**

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## 轮廓封装详图 / Detailed Package Outline Drawings