

Power Device Interface Controller Compatible with IEEE 802.3af Integrated Power MOSFET V0.5

Overview

XS2105S provides a complete interface for Power Devices (PD) in Ethernet Power over Ethernet (PoE) systems compliant with the IEEE 802.3af standard. It offers detection signals, classification signals, and an integrated isolated power switch with surge current control. During surge events, XS2105S limits the current to 180 mA until the isolated power MOSFET is fully turned on, at which point it switches to a higher current limit of 480 mA. The device features input undervoltage lockout (UVLO) with a wide hysteresis and long-duration pulse shielding to compensate for resistive losses in twisted-pair cables, ensuring interference-free transmission during power-on and power-off. XS2105S can withstand input voltages up to 100 V.

Additionally, XS2105S provides a power good (PG) signal, two levels of current limiting, and fold-back thermal protection, along with di/dt limiting. XS2105S is housed in an SOP package and operates over an extended temperature range of -40 °C to 85 °C.

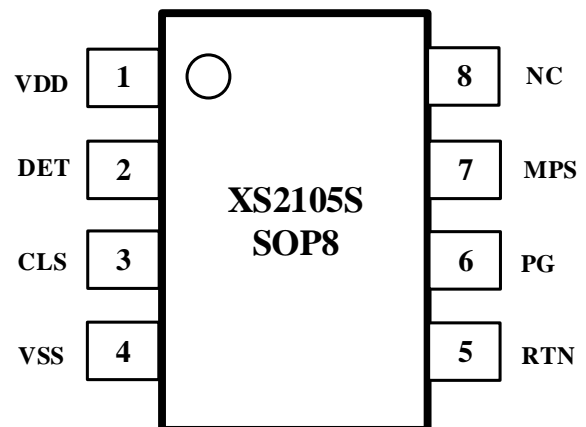
Typical Application

- ◆ IP camera
- ◆ VoIP
- ◆ Wireless AP

Features

- ◆ Compatible with IEEE 802.3af
- ◆ Automatic Power Maintenance (MPS)
- ◆ 0 to 3 level PoE classification
- ◆ Absolute maximum input rating of 100 V
- ◆ Maximum surge current limit of 180 mA
- ◆ Normal operating current limit between 400 mA and 560 mA
- ◆ Current limiting and fold-back protection
- ◆ IEEE 802.3af compatible, 40V UVLO
- ◆ Over temperature protection
- ◆ SOP8 packaging

Pin Configuration



Zhejiang Chipup Electronics Co., LTD

Address: 10th Floor, Building 1, Strong Square, No. 1168 Bin'an Road, Binjiang District, Hangzhou, Zhejiang, China

Official website: www.chipup.com

Zip code: 310053

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