

NCP1090

Integrated PoE-PD Interface Controller, IEEE 802.3af, 15W



Product Overview

For complete documentation, see the data sheet.

The NCP1090, NCP1091 and NCP1092 are members of ON Semiconductor’s Power over Ethernet (PoE) Powered Device (PoEPD) product family and integrate an IEEE802.3af certified interface controller.

The 3 variants incorporate all the required functions, such as detection, classification, under voltage lockout, inrush and operational current limit. A power good signal has been added to guarantee correct enabling/disabling of the DCDC convertor. In addition, the NCP1091 offers a programmable undervoltage while the NCP1092 provides an auxiliary pin for applications supporting auxiliary supplies.

The NCP1090, NCP1091 and NCP1092 are fabricated in a robust high voltage process and integrate a rugged vertical Nchannel DMOS suitable for the most demanding environments and capable of withstanding harsh environments such as hot swap and cable ESD events.

Features

- Fully supports IEEE 802.3af specifications- Allows for up to 15W of power- Certified interoperability between PoE devices
- 500 mA operational current limit
- Industrial temperature range -40°C to 85°C with full operation up to 125°C junction temperature
- Vertical N-Channel DMOS pass switch offers the robustness of discrete MOSFETS

Benefits

- Broad compatibility with power sourcing equipment
- Headroom above the IEEE 802.3af power limitation
- Extended operational range
- More durable than most integrated products

Applications

- Wireless access points
- Voice over IP products
- IP camera

End Products

- WiMax
- WiFi
- Motor control

Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Topology	Phases	Control Mode	V _{CC} Min (V)	V _{CC} Max (V)	f _{sw} Typ (kHz)	Package Type
NCP1090DBRG			Active				36	57		TSSOP-8
NCP1090DG	0.5555		Active				36	57		SOIC-8
NCP1090DRG	0.5555		Active				36	57		SOIC-8