WM5563: IEEE 802.3af/at-Compliant, Powered Device Interface Controller with Integrated Power MOSFET

WM5563 provides a complete interface for a powered device (PD) to comply with the IEEE® 802.3af/at standard in a power-over-Ethernet (PoE) system. WM5563 provides the PD with a detection signature, classification signature, and an integrated isolation power switch with inrush current control. During the inrush period, WM5563 limits the current to less than 180 mA before switching to the higher current limit (720 mA to 880 mA) when the isolation power MOSFET is fully enhanced. The device features an input UVLO with wide hysteresis and long deglitch time to compensate for twisted-pair cable resistive drop and to assure glitch-free transition during power-on/-off conditions. WM5563 can withstand up to 100 V at the input.

WM5563 supports a 2-event classification method as specified in the IEEE 802.3at standard and provides a signal to indicate when probed by Type 2 power-sourcing equipment (PSE). The device detects the presence of a wall adapter power-source connection and allows a smooth switch over from the PoE power source to the wall power adapter.

WM5563 also provides a power-good (PG) signal, two-step current limit and fold-back, over-temperature protection, and di/dt limit.

WM5563 is available in 8-pin, SOP-8 packages and is rated over the -40 °C to +85 °C extended temperature range.

Features

- IEEE 802.3af/at compliant
- 2-event classification
- Simplified wall adapter interface
- PoE classification 0 to 4
- 100V input absolute maximum rating
- Inrush current limit up to 180 mA
- Current limit during normal operation between 720 mA and 880 mA
- Current limit and foldback
- 40V UVLO
- Over-temperature protection
- SOP-8 packages

Applications

- IEEE 802.3af/at powered devices
- IP phones, wireless access nodes, IP security cameras

Physical Specs

Part	●	WM5563
Temp Range	●	-40 °C ~ +85 °C
PIN-Package	●	SOP-8

Pin Configuration