New Product Announcement

AP3928

High-Voltage, Non-Isolated, Offline Switcher with Low Standby Power for Appliances and IoT Applications

The AP3928 is a universal AC, high-voltage input, non-isolated, offline switcher specially designed for applications with a maximum of 600mA of output current or up to 10W of output power.

The device provides a simple power supply solution for smart home appliances, home automation, industrial control, and IoT power applications.

Supporting buck, buck-boost, boost, and non-isolated flyback topologies, the AP3928 provides several differentiating advantages such as low standby power, high light-load efficiency, a cost-saving solution, and rich protection features to ensure reliable operation of the device.

The AP3928 is available in the standard SO-8 package with a pinout that meets HV-creepage requirements.



The Diodes Advantage

The AP3928's multiple non-isolated topologies with low standby power reduce BOM costs in a wide range of applications.

- **Low System BOM Cost**
  Non-Isolated offline switcher configuration saves system BOM cost with limited external components
- **Low Standby Power (<30mW)**
  Meets latest standby power requirements
- **High Light-Load Efficiency**
  Benefits IoT devices and other equipment that spend large periods of time in sleep mode
- **Rich Protection Features: OTP, OLP, SCP**
  Overtemperature protection (OTP), overload protection (OLP), and short circuit protection (SCP) ensure reliable operation
- **Enhanced Output Current and Output Power Capacity**
  Provides an output current maximum of 600mA and output power maximum of 10W

Applications

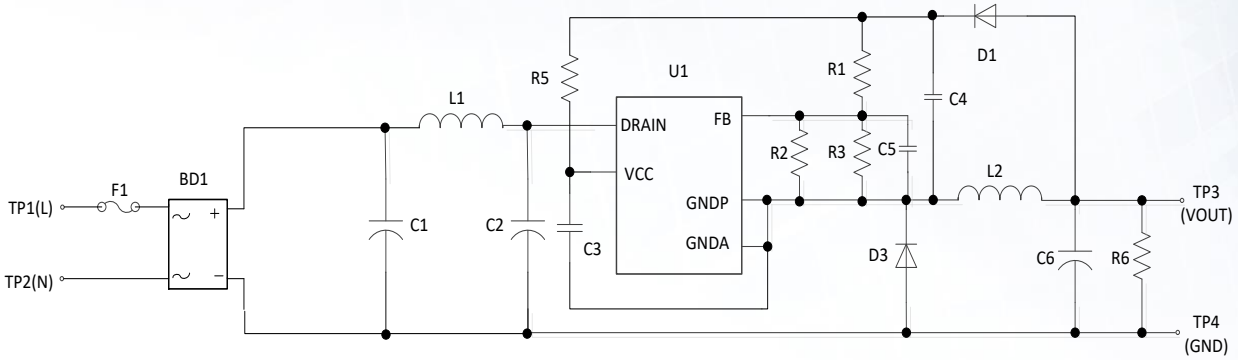
- Smart home appliances
- Industrial controls
- Standby and auxiliary power
- Large household appliances/white goods
- IoT power applications

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Typical Application



High-Voltage, Non-Isolated, Offline Switcher Portfolio

Part Number	UVLO Threshold on/off (V)	$R_{DS(ON)}$ (Ω)	BV_{DSS} (V)	Peak Current (mA)	Standby Power (mW)	Power Rating (W)	Temperature Range (°C)	Package
AP3928	**9.0/7.9**	**6.5**	**700**	**1100**	**< 30**	**10**	**-40 to +125**	**SO-8**
AP3917B	6.5/4.5	16	650	280	< 30	2	-40 to +125	SO-7
AP3917C	6.5/4.5	16	650	420	< 30	3	-40 to +125	SO-7
AP3917D	6.5/4.5	10.5	700	500	< 30	5	-40 to +125	SO-7

Ordering Information

Part Number	Compliance	Package	Package Code	Quantity	Carrier	Moisture Sensitivity
AP3928S-13	Standard	SO-8	S	4,000	13” Tape and Reel	MSL-3