

Low Standby Power, High-Voltage, Non-Isolated Buck Power Switcher for Appliances and IoT

The AP3917B/C/D is a family of universal AC, high-voltage input, step-down power switchers with different HV MOS switches to support various power applications.

- AP3917B 2W
- AP3917C 4W
- AP3917D 6W

The devices provide a simple power supply solution for smart home appliances, home automation, industrial control, and IoT power applications. Supporting both non-isolated buck or offline flyback topology solutions, they have several differentiating advantages:

- Low standby power
- High light-load efficiency
- Cost-saving BOM
- Rich protection functions to ensure reliable operation

All three are available in SO-7 package that supports HV creepage requirements.



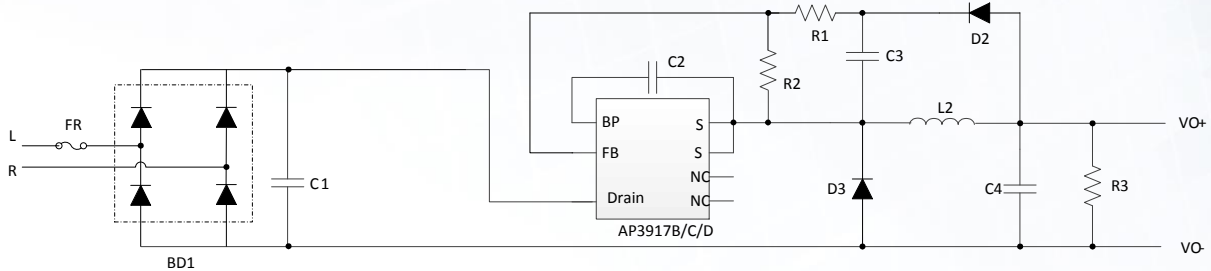
The Diodes Advantage

- **Low System BOM Cost**
Non-isolated buck configuration removes expensive components
- **Low Standby Power (<30mW)**
Beats latest standby power requirements
- **High Light-Load Efficiency**
Ideal for IoT devices and other equipment that spends large periods time sleeping
- **Rich Protection: OTP, OLP, SCP**
Ensures reliable operation
- **Industry-Standard Footprint Compatible Family**
Matches various power requirements
B/C/D - 2W/4W/6W output power

Applications

- Smart Home Appliances
- Industrial Controls
- Home Automation
- IoT Power
- Standby and Auxiliary Power

Typical Application Circuit



Product Portfolio

| Part Number | Application | Start-Up Current | UVLO Threshold on/off (V) | $R_{DS(ON)}$ (Ω) | BV_{DSS} (V) | Peak Current (mA) | Standby Power (mW) | Power Rating (W) | Package |
|-------------|---------------------|------------------|---------------------------|---------------------------|----------------|-------------------|--------------------|------------------|---------|
| AP3917B | Small Appliance IoT | 10 | 8.0/8.3 | 16 | 650 | 170 | < 30 | 2 | SO-7 |
| AP3917C | | 10 | 8.0/8.3 | 12 | 650 | 270 | < 30 | 4 | SO-7 |
| AP3917D | | 10 | 8.0/8.3 | 10.5 | 700 | 370 | < 30 | 6 | SO-7 |

Ordering Information

| Part Number | Package | Temperature Range | Marking ID | Packing |
|--------------|---------|-------------------|------------|------------------|
| AP3917BS7-13 | SO-7 | -40°C to +125°C | 3917B | 4000/Tape & Reel |
| AP3917CS7-13 | SO-7 | -40°C to +125°C | 3917C | 4000/Tape & Reel |
| AP3917DS7-13 | SO-7 | -40°C to +125°C | 3917D | 4000/Tape & Reel |