

New Product Announcement

AP7175
AP7176B



3A Ultra-Low Dropout Linear Regulator with Soft-Start and Power Good

The AP7175 and AP7176B are 3A ultra low-dropout (LDO) linear regulators that feature an enable input and a power-good output.

Soft-Start

AP7175/AP7176B incorporates an internal Soft-Start function which reduces the in-rush current surge during start-up. The typical Soft-Start time is 0.6ms

Current-Limit Protection:

AP7175/AP7176B limit the maximum current to avoid damage to the load and AP7175 during overload conditions.

Short Circuit Protection

AP7175 incorporates current limit foldback function to reduce the output current to 1.1A when the FB voltage falls below 0.2V (typ.)



The Diodes Advantage

- **Ultra-Low Dropout, 230mV at 3A Loading**
Higher Efficiency Could Be Achieved, Ex. Over 80% Efficiency Could Be Achieved Taking $V_{OUT} = 1.2V$, $V_{IN} = 1.43V$ as Example.
- **Power Good Output Function**
AP7175/76B monitors the voltage output condition and pulls PG low if the voltage gets too low removing the need for a separate reset generator.
- **Full Protection to Increase System Reliability**
Current Limit, Thermal Shutdown and Short Circuit Protection Increase the Robustness of AP7175/7176B in Actual Application.
- **SO-8EP/MSOP-8EP Packages with Exposed Pad**
AP7175/7176B are both available in SO-8EP, MSOP-8EP packages with an Exposed Pad to extend the Temp. Range it can be used in.

Applications

- Notebook
- PC/Motherboard
- Wireless Communication
- Set-Top-Boxes
- Front Side Bus VTT (1.2V/3.3A)

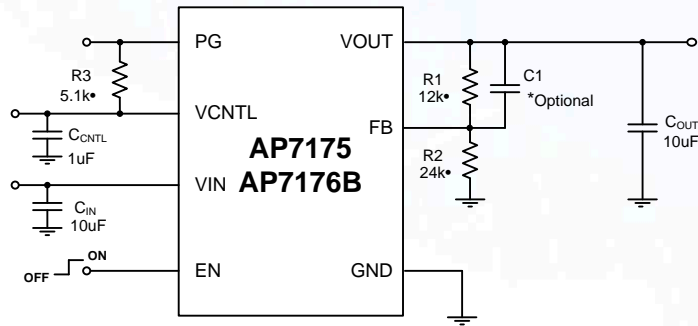


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3A Ultra Low Dropout Linear Regulator with Enable

Typical Application Circuit:



Product Portfolio

Part	Min. Input Voltage, $V_{IN(MIN)}$	Max Input Voltage, $V_{IN(MAX)}$	Min. CNTL Voltage, $V_{CNTL(MIN)}$	Max CNTL Voltage, $V_{CNTL(MAX)}$	Output Voltage, V_{OUT}	Dropout Voltage, V_{DROP}	Output Current, I_{OUT}	Shutdown Current, I_{SD}	Available Packages
AP7175	1.2V	3.65V	3.0V	5.5V	ADJ	0.23V	3A	15 μ A	SO-8EP, MSOP-8EP
AP7176B	1.2V	5.5V	3.0V	5.5V	ADJ	0.3V	3A	15 μ A	SO-8EP, MSOP-8EP

Ordering Information

Device	Package Code	Packaging (Note 1)	Reel Size	Tape Width	Quantity
AP7175SP-13	SP	SO-8EP	13"	12mm	2500
AP7175MP-13	MP	MSOP-8EP	13"	12mm	2500
AP7176BSP-13	SP	SO-8EP	13"	12mm	2500
AP7176BMP-13	MP	MSOP-8EP	13"	12mm	2500

All variants are in packages that are "Green" Molding Compound (No Br, Sb) with Lead Free Finish/RoHS Compliant (Note 1)

Note: 1. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied, see EU Directive 2002/95/EC Annex Notes