



New Product Announcement

AP7375

Ultra-Low Quiescent 300mA, 45V LDO Provides Increased Operating Life in Battery-Powered Equipment

The DIODES™ AP7375 is a wide (3V to 45V) input voltage range low-dropout regulator. Its 45V maximum input voltage, and extremely low 2.1µA quiescent current make it an efficient choice for multi-cell battery-powered equipment.

This high VIN LDO features a very fast line/load transient response against the rapid input voltage and load current changes. Its high PSRR of 85dB at 1kHz make it suitable for noise-sensitive industrial applications.

The AP7375 can supply output currents up to 300mA, and is available in 1.8V, 3.0V, 3.3V, and 5V fixed output voltages with $\pm 2\%$ output tolerance. Protection features for the part include overcurrent and short-circuit protection, plus overtemperature shutdown.

The device is available in SOT23, SOT25, and SOT89 packages, with U-DFN2020-6 expected in 2Q2023.



The DIODES™ Advantage

The 45-V AP7375, with its low quiescent current, operates from standard power rails and multi-cell, battery-powered, point-of-load (POL) applications.

- **Wide Input Voltage: 3V to 45V**
Supports 5V, 9V, 12V, and 24V power rails with good transient response
- **Ultra-Low Quiescent Current at 2.1µA**
Extends operation life of battery-powered products
- **High PSRR up to 85dB at 1kHz**
Suitable for noise-sensitive industrial applications
- **Output Voltage: 1.8V, 3.0V, 3.3V, 5V**
Includes standard I/O voltage levels
- **Leaded (SOT23, SOT25, and SOT89) and Ultra-Small High-Power-Density (U-DFN2020-6 – expected 1Q2023) Packages**
Provides versatile package options with industry-standard footprints

Applications

- Battery-powered equipment
- Power tools
- Smart meters
- Home appliances
- Lighting devices

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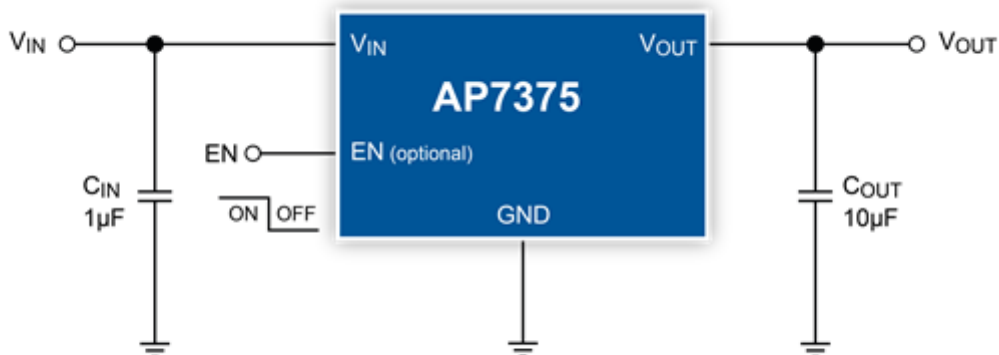
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Typical Application



Wide VIN Low I_Q LDO Product Portfolio

Part Number	V_{IN}	V_{OUT}	I_{OUT}	V_{DROP} @ Full Load	I_Q	Output Accuracy	Enable	Output Discharge	PSRR @1kHz	Package
	V	V	mA	mV	µA	%			dB	
AP7375	3.0 to 45	1.8, 3.0, 3.3, 5.0	300	350 @100mA	2.1	2	Yes	No	85	SOT23, SOT25 SOT89
AP7387	5.0 to 60	3.0, 3.3, 3.6, 5.0	150	1100	2	2	No	No	70	SOT23, SOT25, SOT89, U-DFN2020-6

Ordering Information

Orderable Part Number	Fixed V_{OUT}	Compliance (Only Automotive Supports PPAP)	Package	Moisture Sensitivity	Packing	
	V				Quantity	Carrier
AP7375-xxSA-7	18 : 1.8V 30 : 3.0V 33 : 3.3V 50 : 5.0V	Standard	SOT23	MSL-1	3,000	7" Tape & Reel
AP7375-xxW5-7			SOT25	MSL-1	3,000	7" Tape & Reel
AP7375-xxY-13			SOT89	MSL-1	2,500	13" Tape & Reel