



New Product Announcement

AP7387

60V, 70dB PSRR LDO with Industry-Leading 2 μ A Quiescent Current

The DIODES™ AP7387 series has a wide 5V to 60V input voltage range with an extremely low 2 μ A quiescent current, making the device a good choice for multi-cell battery-powered applications and other equipment where standby current consumption is important.

This high V_{in} LDO also has a high 70dB PSRR (at 1kHz) coupled with very fast line/load transient responses. Its ability to reject rapid input voltage and load current changes makes it suitable for noise-sensitive industrial applications.

The AP7387 has a maximum 150mA output current and is available in 3.0V, 3.3V, 3.6V, and 5V fixed output voltage versions with $\pm 2\%$ output tolerance. The device also includes current limit, short-circuit, and thermal shutdown protections.

The AP7387 is available in the SOT23, SOT25, SOT89, and U-DFN2020-6 packages for different application requirements.



The DIODES™ Advantage

The AP7387 maximizes system run time with its ultra-low quiescent current, supporting many standard power rails and multi-cell battery-powered applications.

- **Wide Input Voltage: 5V to 60V**
Covers 5V, 9V, 12V, 24V, and 48V power rails with good transient responses
- **Ultra-Low Quiescent Current at 2 μ A**
Extends lifespan of battery-operated products
- **High PSRR of up to 70dB @ 1kHz**
Suitable for noise-sensitive industrial applications
- **Output Voltage: 3.0V, 3.3V, 3.6V, and 5V**
Covers standard I/O voltage levels
- **Available in Three Leaded Packages and One Ultra-Small DFN Package**
Industry-standard SOT23, SOT25, SOT89 and high-power-density U-DFN2020-6 provide versatile package options for most application requirements

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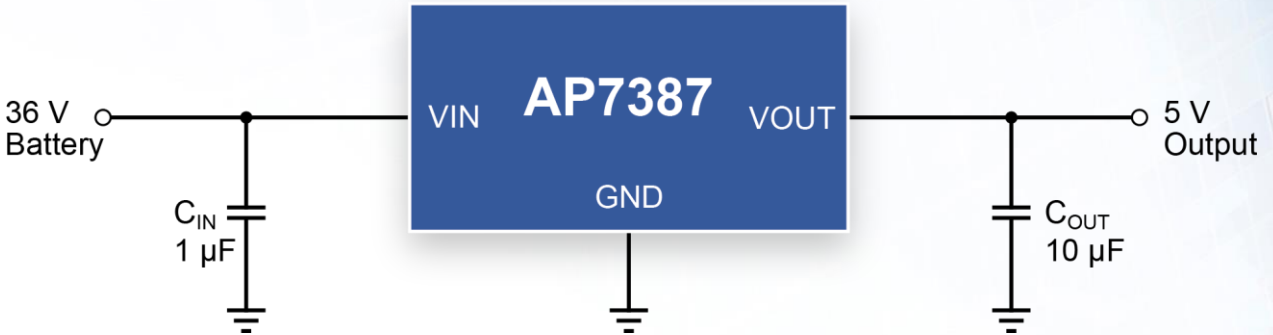
Applications

- Battery-powered equipment
- Smoke detectors
- Power tools
- Home appliances
- Remote/line-powered equipment



AP7387

Typical Application



Wide Vin, Low IQ, 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)	
AP7381	3.3 to 40	2.8, 3.3, 5.0, 7.0	150	1000	2.5	2	Yes	No	60	SOT23, SOT89, TO92
AP7384	3.3 to 40	2.8, 3.3, 5.0, 7.0	50	500	2.5	2	No	No	60	SOT23, SOT89, TO92
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	Output Voltage (V)	Compliance (Only Automotive Supports PPAP)	Package Code	Package	Moisture Sensitivity	Reel Size (Inches)	Quantity
AP7387-30SA-7	3.0	Standard	SA	SOT23	MSL-1	7	3000
AP7387-33SA-7	3.3	Standard	SA	SOT23	MSL-1	7	3000
AP7387-36SA-7	3.6	Standard	SA	SOT23	MSL-1	7	3000
AP7387-50SA-7	5.0	Standard	SA	SOT23	MSL-1	7	3000
AP7387-30Y-13	3.0	Standard	Y	SOT89	MSL-3	13	2500
AP7387-33Y-13	3.3	Standard	Y	SOT89	MSL-3	13	2500
AP7387-36Y-13	3.6	Standard	Y	SOT89	MSL-3	13	2500
AP7387-50Y-13	5.0	Standard	Y	SOT89	MSL-3	13	2500
AP7387-30W5-7	3.0	Standard	W5	SOT25	MSL-1	7	3000
AP7387-33W5-7	3.3	Standard	W5	SOT25	MSL-1	7	3000
AP7387-36W5-7	3.6	Standard	W5	SOT25	MSL-1	7	3000
AP7387-50W5-7	5.0	Standard	W5	SOT25	MSL-1	7	3000
AP7387-30FDC-7	3.0	Standard	FDC	U-DFN2020-6 (Type C)	MSL-1	7	3000
AP7387-33FDC-7	3.3	Standard	FDC	U-DFN2020-6 (Type C)	MSL-1	7	3000
AP7387-36FDC-7	3.6	Standard	FDC	U-DFN2020-6 (Type C)	MSL-1	7	3000
AP7387-50FDC-7	5.0	Standard	FDC	U-DFN2020-6 (Type C)	MSL-1	7	3000
AP7387-30FDCR-7	3.0	Standard	FDCR	U-DFN2020-6 (Type C)	MSL-1	7	3000
AP7387-33FDCR-7	3.3	Standard	FDCR	U-DFN2020-6 (Type C)	MSL-1	7	3000
AP7387-36FDCR-7	3.6	Standard	FDCR	U-DFN2020-6 (Type C)	MSL-1	7	3000
AP7387-50FDCR-7	5.0	Standard	FDCR	U-DFN2020-6 (Type C)	MSL-1	7	3000