



AP7179D

High-Output Accuracy, Low-Noise, 3A LDO for Noise-Sensitive Applications

The AP7179D is a low-noise ($4.4\mu\text{V}_{\text{RMS}}$), low-tolerance (1%), low-dropout voltage regulator (LDO) capable of sourcing 3A, with a maximum dropout of only 180mV.

Its output voltage can be set from 0.8V to 3.95V via pin-selection, and also can be adjusted from 0.8V to 5.0V using an external resistor divider. A minimum supply voltage as low as 1.1V, using only one supply pin, makes it easier to integrate into the board.

This device's combination of low noise, high PSRR, and high-output current capability makes it ideal for noise-sensitive power rail conversion, limiting power-supply-generated phase noise, and clock jitter. These capabilities make the AP7179D ideal for powering high-performance SerDes, ADCs, DACs, and RF components.

The enable pin and power-good flag makes sequencing easier, especially for digital loads such as ASICs, FPGAs, and DSPs—which often require high-accuracy, remote sensing, excellent transient performance, and soft-start capabilities. The output-noise immunity is further enhanced by using a bypass capacitor on its NR/SS pin.

The AP7179D is packaged in the high-power density W-QFN3535-20 (Type A1) package.



The DIODES Advantage

The AP7179D, with its 1% tolerance and low $4.4\mu\text{V}_{\text{RMS}}$ noise, provides a simple, compact solution for noise-sensitive power-conversion applications.

- Wide 1.1V to 6.5V V_{IN} Range with Low 180mV Drop-Out Voltage**
 Provides a simple low-dropout solution for core-core and I/O-core voltage-regulation applications
- Low 180mV at 3A Dropout Voltage**
 Provides a wide voltage-conversion range
- Two Output Voltage Modes: Pin-Strapped Output Voltages from 0.8V to 3.95V, and Adjustable Output Voltages from 0.8V to 5.5V**
 Enables versatile adjustments of required output voltages
- Ultra-High Frequency PSRR (40dB @ 500kHz) and Low Noise ($4.4\mu\text{V}_{\text{RMS}}$ @ 0.8V)**
 Provides a clean power rail for noise-sensitive applications
- High Stability with Ceramic Output Capacitors**
 Provides good transient response and stable output voltages

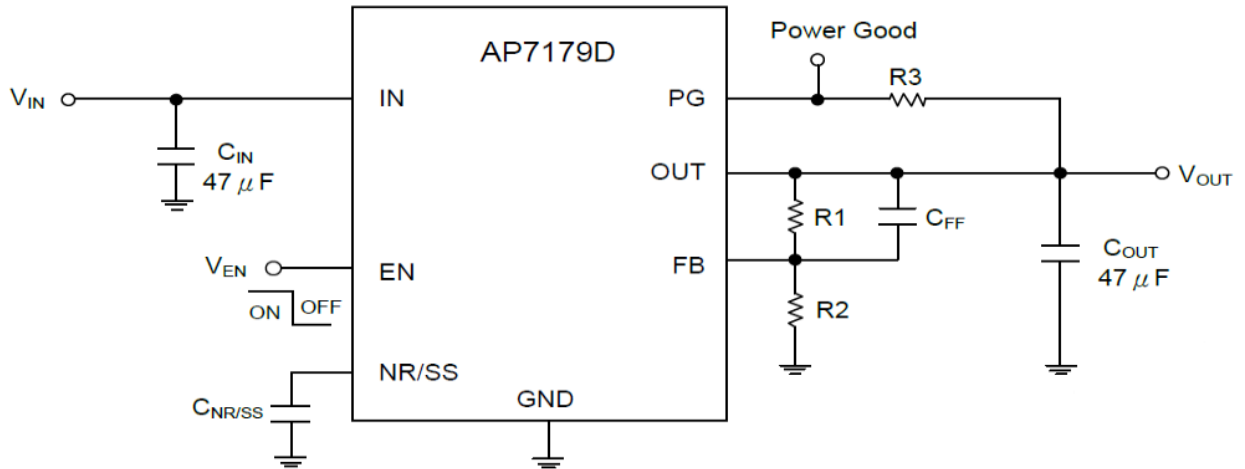
Applications

- Macro remote radio units (RRU)
 - Outdoor backhaul units
 - Active antenna system mMIMO (AAS)
- Ultrasound Scanners
 - Radar Systems
 - Lab/field instrumentation

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Typical Application



Product Portfolio

Part Number	V_{IN}	V_{OUT}	I_{OUT}	V_{DROP}	Noise	PSRR (@ 500kHz)	Accuracy	Package
	V	V	A	mV	μV_{RMS}	dB	%	
AP7179D	1.1 to 6.5	Programmable: 0.8 to 3.95 Adjustable: 0.8 to 5.5	3	180	4.4	40	1	W-QFN3535-20 (Type A1)

Ordering Information

Orderable Part Number	Compliance (Only Automotive Supports PPAP)	Package	Moisture Sensitivity	Packing	
				Quantity	Carrier
AP7179DSKZ20-13	Standard	W-QFN3535-20 (Type A1)	MSL-1	5,000	13" Tape & Reel