

## **DC-to-DC Non-Synchronous Regulators Simplify Intermediate Power Bus and Point-of-Load Power Designs**

Analog Devices, Inc. (ADI) has released the ADP2302 and ADP2303 dc-to-dc non-synchronous switching regulators. The new 20-V 2 A (ADP2302) and 3 A (ADP2303) step-down, dc-to-dc switching regulators integrate a high-side MOSFET that delivers power conversion efficiencies greater than 90 percent. The new regulators also feature internal loop compensation, integrated soft-start circuitry and bootstrap diodes to enable high-density solutions for intermediate bus generation and point-of-load regulation. The highly integrated ADP2302 and ADP2303 are available in SOIC packages. The ADP2302 and ADP2303 also support a wide input voltage range from 3 V to 20 V to accommodate a diversity of point-of-load applications, including consumer electronics and industrial and communications infrastructure equipment. The output voltage is adjustable from 0.8 V to 80 percent of input voltage (VIN). The regulators' current-mode, fixed-frequency PWM (pulse-width modulation) architecture provides excellent stability and transient response. Under light loads, the regulators automatically operate in PFM (pulse frequency modulation) to reduce light load losses. A precision-enable pin allows the regulator to be turned on at a precise input voltage for sequencing of multiple devices. System reliability and protection are enhanced further through OCP (over-current protection), UVLO (under-voltage lockout) and TSD (thermal shutdown). The ADP2302 and ADP2303 are ideal replacements for less efficient linear regulators.,

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