

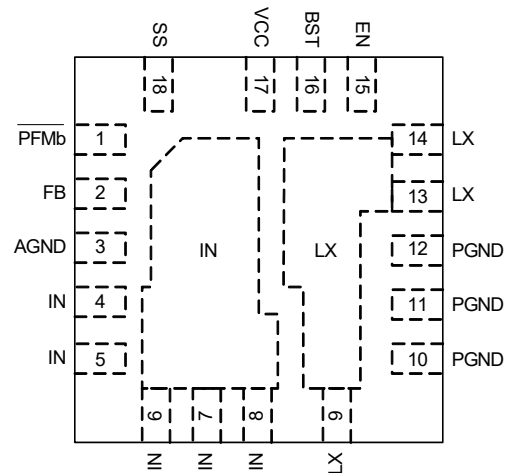
Ordering Information

Part Number	Ambient Temperature Range	Package	Environmental
AOZ2151PQI-10	-40°C to +85°C	18-Pin 3mm x 3mm QFN	Green Product



AOS Green Products use reduced levels of Halogens, and are also RoHS compliant. Please visit www.aosmd.com/media/AOSGreenPolicy.pdf for additional information.

Pin Configuration



18-Pin 3mm x 3mm QFN
(Top View)

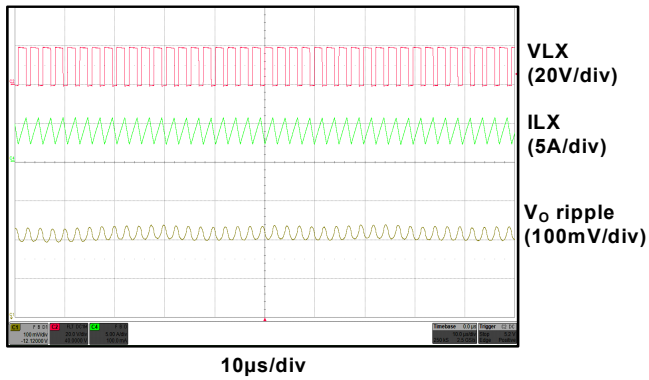
Pin Description

Pin Number	Pin Name	Pin Function
1	$\overline{\text{PFMb}}$	$\overline{\text{PFMb}}$ Selection Input. Connect $\overline{\text{PFMb}}$ pin to VCC for forced PWM operation. Connect $\overline{\text{PFMb}}$ pin to ground for $\overline{\text{PFMb}}$ operation to improve light load efficiency.
2	FB	Feedback Input. Adjust the output voltage with a resistive voltage-divider between the regulator's output and AGND.
3	AGND	Analog Ground.
4, 5, 6, 7, 8	IN	Supply Input. IN is the regulator input. All IN pins must be connected together.
9, 13, 14	LX	Switching Node.
10, 11, 12	PGND	Power Ground.
15	EN	Enable Input. The AOZ2151PQI-10 is enabled when EN is pulled high. The device shuts down when EN is pulled low.
16	BST	Bootstrap Capacitor Connection. The AOZ2151PQI-10 includes an internal bootstrap diode. Connect an external capacitor between BST and LX as shown in Figure 1.
17	VCC	Supply Input for analog functions. Bypass VCC to AGND with a 4.7 μF ~10 μF ceramic capacitor. Place the capacitor close to VCC pin.
18	SS	Soft-Start Time Setting Pin. Connect a capacitor between SS and AGND to set the soft-start time.

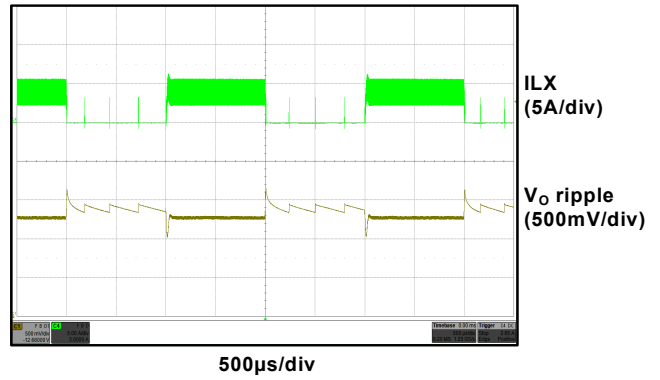
Typical Performance Characteristics

Circuit of Typical Application. $T_A = 25^\circ\text{C}$, $V_{IN} = 19\text{V}$, $V_{OUT} = 12\text{V}$, PFM operation, unless otherwise specified.

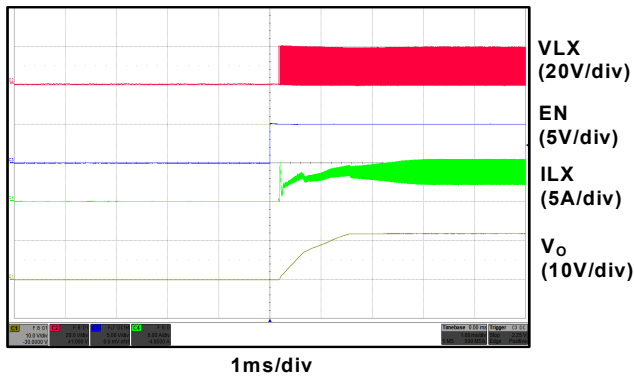
Normal Operation



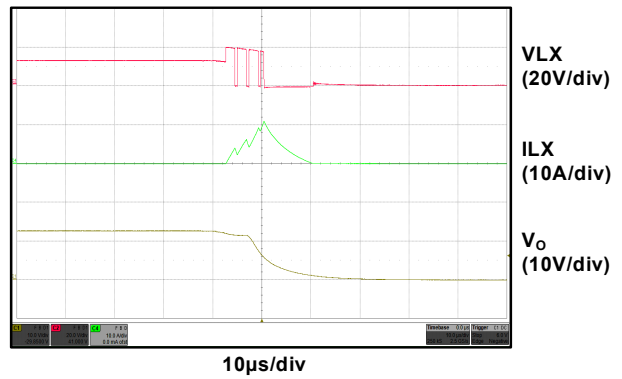
Load Transient 0A to 4A



Full Load Start-up



Short Circuit Protection



Efficiency vs. Load Current

