



New Product Announcement

AP64060

40V, 600mA, Synchronous Buck Converter Delivers High Efficiency in Point-of-Load Applications

The DIODES™ AP64060 is a 600mA, synchronous buck converter with a wide input voltage range of 4.5V to 40V.

Integrating a 600mΩ high-side power MOSFET and a 300mΩ low-side power MOSFET, the part provides a high-efficiency step-down conversion.

It minimizes external component count through its adoption of peak current mode control along with an integrated loop compensation network, making it easy to use.

The AP64060 design is optimized for electromagnetic interference (EMI) reduction. The device has a proprietary gate driver scheme to resist switching node ringing without sacrificing MOSFET turn-on and turn-off times. This reduces high-frequency radiated EMI noise caused by MOSFET switching.

The AP64060 is available in the TSOT26 package.



The Diodes™ Advantage

The AP64060 provides high-efficiency DC-DC conversion for industrial point-of-load (POL) applications.

- **Wide 4.5V to 40V Input Voltage Range**
Works across the full voltage range of 5V, 12V, and 24V rails
- **High Switching Frequency of 2.2MHz**
Allows the use of smaller value inductors, reducing solution footprint
- **Low (90μA) Quiescent Current (I_Q) and 1μA Shutdown Current**
Enables systems to meet <100μA standby requirements of many applications
- **Packaged in the Small Footprint and Industry-Standard TSOT26**

Applications

- 5V, 12V, and 24V distributed power bus supplies
- eMeters
- eBikes
- White goods and small home appliances
- Security systems

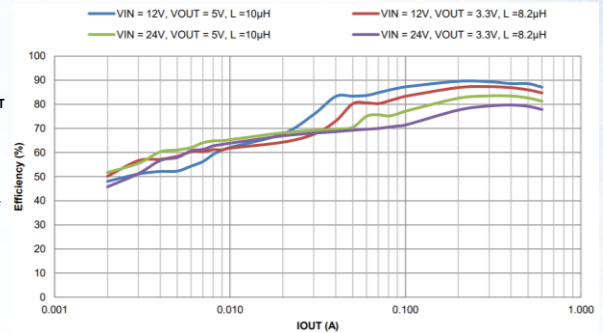
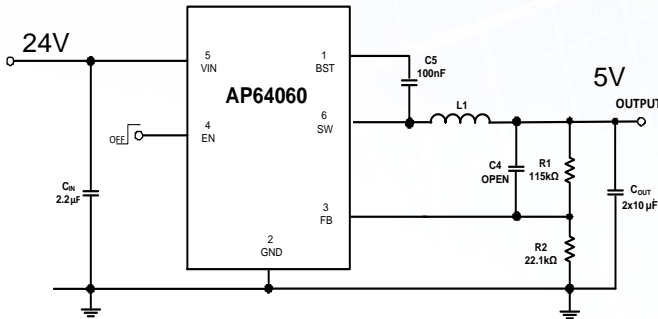
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Typical Application



40V Synchronous Buck Converter Portfolio

Part Number	V_{IN} Range (V)	V_{OUT} Range (V)	Output Current (A)	HS / LS $R_{DS(ON)}$ (m Ω)	Switching Frequency (kHz)	I_Q (μ A)	Key Features					Ambient Temperature ($^{\circ}$ C)	Package
							Adj. f_{SW}	Ext. Sync	Ext. Comp	Auto PFM	Adj. SS		
AP64060	4.5 - 40	0.8 - 24	0.60	600/300	2,200	90	-	-	-	Y	-	-40 to +125	TSOT26
AP64100	3.8 - 40	0.8 - V_{IN}	1.0	150 / 80	100 - 2,200	25	Y	Y	Y	Y	-	-40 to +125	SO-8EP
AP64102							Y	Y	-	Y	Y		
AP64200	3.8 - 40	0.8 - V_{IN}	2.0	150 / 80	100 - 2,200	25	Y	Y	Y	Y	-	-40 to +125	SO-8EP
AP64202							Y	Y	-	Y	Y		
AP64350	3.8 - 40	0.8 - V_{IN}	3.5	75 / 45	100 - 2,200	22	Y	Y	Y	Y	-	-40 to +125	SO-8EP
AP64351					570		-	-	Y	Y	Y		
AP64352					100 - 2,200		Y	Y	-	Y	Y		
AP64500	3.8 - 40	0.8 - V_{IN}	5.0	45 / 20	100 - 2,200	25	Y	Y	Y	Y	-	-40 to +125	SO-8EP
AP64501					570		-	-	Y	Y	Y		
AP64502					100 - 2,200		Y	Y	-	Y	Y		

Note: AP64xx0 have same pin out, AP64xx1 have same pin out, AP64xx0 have same pin out.

Ordering Information

Orderable Part Number	Compliance (Only Automotive Supports PPAP)	Package Code	Package	Moisture Sensitivity	Packing	
					Carrier	Quantity
AP64060WU-7	Standard	WU	TSOT26	MSL-1	7" Tape & reel	3,000