



New Product Announcement

AP62400 AP62401

4A, 18V Synchronous DC-DC Buck Converter for Consumer and Industrial Applications

The AP62400 and AP62401 are high-efficiency, 4A, synchronous step-down DC-DC converters which operate from a 4.2V to 18V input voltage range.

The AP62400 achieves high light-load efficiency by going into PFM mode, while the AP62401 maintains low output ripple by staying in PWM mode.

The AP62400 and AP62401 output voltages are adjustable from 0.8V to 7V. Their switching frequency is preset at 800kHz to balance external LC cost with efficiency.

These buck converters include a full protection feature set that makes the system more robust including overcurrent protection, undervoltage lockout, and thermal shutdown.

The AP62400 and AP62401 are available in the TSOT26 package and are pin compatible to the AP62150 (1.5A), AP6220x (2A), AP62250 (2.5A), and AP6230x (3A) series.

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The DIODES Advantage

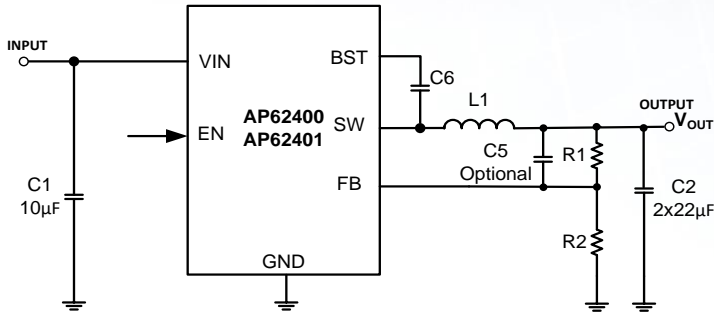
The AP62400 and AP62401 are high-efficiency DC-DC converters that provide a high level of design flexibility.

- 4.2V to 18V Operating Voltage Range**
 Operates across the full 5V~12V voltage range of appliance and consumer electronics applications
- Built-In Current Source on EN Pin**
 Supports sequencing and tracking capability/control
- Internal 2.5ms Soft-Start Time**
 Reduces start-up inrush currents
- Constant On-Time (COT) Control**
 Provides fast transient response; eases loop stabilization
- TSOT26 Pinout Compatibility Between 1.5A, 2A, 2.5A, and 3A Versions**
 Simplifies PCB layout with design flexibility

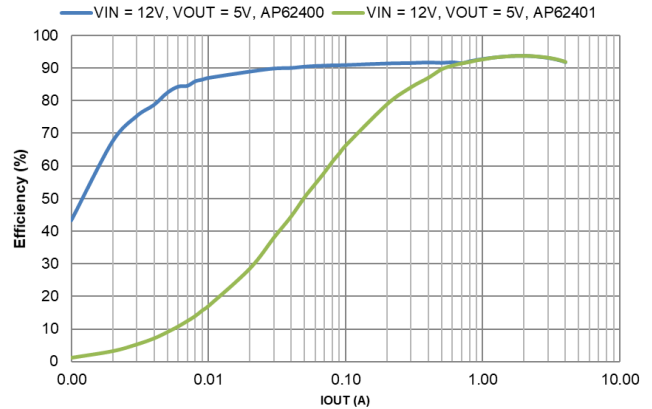
Applications

- IoT devices
 - Smart speakers
 - Power tools
 - Gaming consoles
 - Network devices
- Flat screen TV sets and monitors
 - White goods and small home appliances
 - FPGA, DSP, and ASIC supplies

Typical Application Circuit



Efficiency vs. Output Current



Product Portfolio

Part Number	V _{IN} Range	V _{OUT} Range	Output Current	R _{DS(ON)} HS / LS	Switching Frequency	Mode	I _a	Ambient Temperature	Package
	V	V					µA	°C	
AP62401	4.2 – 18	0.8 – 7	4	50 / 22	800	PWM	440	-40 to +85	TSOT26
AP62400	4.2 – 18	0.8 – 7	4	50 / 22	800	PFM/PWM	190	-40 to +85	TSOT26
AP62301	4.2 – 18	0.8 – 7	3	70 / 45	750	PWM	265	-40 to +85	TSOT26/SOT563
AP62300T	4.2 – 18	0.763 – 7	3	70 / 45	750	PFM/PWM	155	-40 to +85	TSOT26
AP62300	4.2 – 18	0.8 – 7	3	70 / 45	750	PFM/PWM	155	-40 to +85	TSOT26/SOT563
AP62250	4.2 – 18	0.8 – 7	2.5	70 / 45	1300	PFM/PWM	155	-40 to +85	TSOT26/SOT563
AP62201	4.2 – 18	0.8 – 7	2	90 / 65	750	PWM	265	-40 to +85	TSOT26/SOT563
AP62200T	4.2 – 18	0.763 – 7	2	90 / 65	750	PFM/PWM	155	-40 to +85	TSOT26
AP62200	4.2 – 18	0.8 – 7	2	90 / 65	750	PFM/PWM	155	-40 to +85	TSOT26/SOT563
AP62150	4.2 – 18	0.8 – 7	1.5	90 / 65	1300	PFM/PWM	155	-40 to +85	TSOT26/SOT563

Ordering Information

Orderable Part Number	Compliance (Only Automotive Supports PPAP)	Package	Identification Code	Moisture Sensitivity	Packing	
					Quantity	Carrier
AP62400WU-7	Standard	TSOT26	DA	MSL-1	3,000	7" Tape & Reel
AP62401WU-7	Standard	TSOT26	DB	MSL-1	3,000	7" Tape & Reel