



# New Product Announcement

AP65552, AP65452  
AP65450

## 5A/4A Adaptive COT Synchronous DC-DC Buck Converter

The AP65552/AP65452/AP65450 is an adaptive constant on-time mode synchronous buck converter providing high efficiency, excellent transient response and high DC output accuracy for low-voltage regulation in digital TV and monitors.

The constant-on-time control scheme handles wide input/output voltage ratios and provides low external component count. The AP65450 supports seamless transition between continuous conduction mode (CCM) at higher load conditions and discontinuous conduction mode (DCM) at lighter load conditions to maintain high efficiency at light load conditions.

The AP65452/AP65552 are at fixed 650KHz to achieve a good output stability. The AP65552/AP65452/ AP65450 also features programmable soft-start, UVLO, OTP and OCP to protect the circuit.

This IC is available in SO-8EP package.



### The Diodes Advantage

- **Synchronous DCDC Buck converter with continued load current of 5A (4A)**  
Increases efficiency in light load condition (AP65450)  
Standard industry pinout
- **Protection**
  - **Over Current Protection**
  - **Thermal Shutdown**  
Improves robustness of circuit and prevents pre-mature failure
- **Adaptive COT Mode**  
Fast transient response  
No need external compensation

### Applications

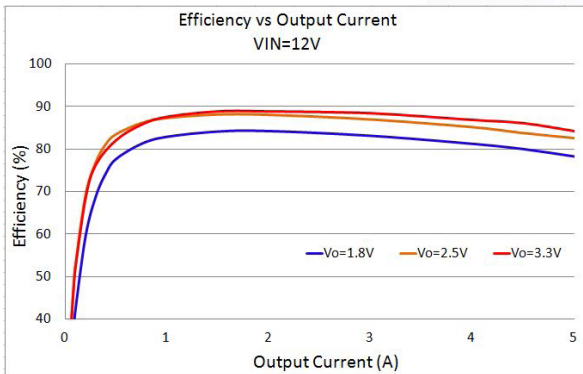
- Game Consoles
- TV and Monitors
- Set-top Box
- Network Systems
- Distributed Power Systems
- Home Audio
- Consumer Electronics
- Green Electronics



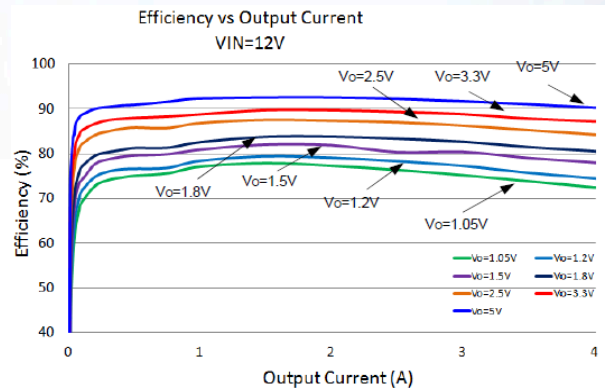
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# 5A/4A Adaptive COT Synchronous DC-DC Buck Converter

## AP65552



## AP65450



## Product Portfolio

Part No	Min. Input Voltage	Max. Input Voltage	Output Voltage	Output Current (A)	Frequency (kHz) typ	Internal Vref (V)	Efficiency (%)	Standby Quiescent Current (mA) typ	Operating Ambient Temp Range (°C)	Features						Available Packages
	V	V	V	A	KHz	V				Enable Pin	Current Limit Protection	Thermal Shutdown	Adjustable Output Voltage	Prog Soft-start	LLHE	
AP65552	4.5	18	0.76~6	5	650	0.765	89	0.9	-40 to +85	Y	Y	Y	Y	Y	N	SO-8EP
AP65452	4.5	18	0.76~6	4	650	0.765	92	0.9	-40 to +85	Y	Y	Y	Y	Y	N	SO-8EP
AP65450	4.5	18	0.76~6	4	650	0.765	92	0.9	-40 to +85	Y	Y	Y	Y	Y	Y	SO-8EP

## Ordering Information

Device	Packaging	\$ @ 250k	Reel Size	Quantity
AP65552SP-13	SO-8EP	0.49	13"	2500
AP65452SP-13	SO-8EP	0.45	13"	2500
AP65450SP-13	SO-8EP	0.45	13"	2500