



Light Load Improved 5A and 4A Sync DC-DC Buck Converter Family

The AP6550x AP6540x are a family of 4A & 5A synchronous DC-DC buck converters with integrated low $R_{DS(ON)}$ high and low side MOSFETs.

The family consists of three different switching frequencies of 340, 500 and 750kHz which allows the use of smaller external components, reducing board space.

The devices enable continued load current of up to 4A/5A with efficiencies as high as 96%.

The AP6550x and AP6540x product family implements an automatic custom light load efficiency improvement algorithm.

The products are available in a standard Green SO-8EP package that is RoHS compliant.



The Diodes Advantage

- **Synchronous 4A & 5A DC-DC Buck converter with Light Load High Efficiency and peak output current of 7A**
High efficiency across all load conditions including light load.
- **Three different switching frequency options (340kHz, 500kHz and 750kHz)**
Uses smaller component sizes and allow optimization for interference issues.
- **Comprehensive Built-in Protection Features**
 - **Over Current Protection with hiccup**
 - **Thermal Shutdown**Improves robustness of circuit and prevents pre-mature failure.
- **Industry Standard pin out in SO-8EP**
Identical pinout for 2-5A devices for easy change to adjust for customer requirements..

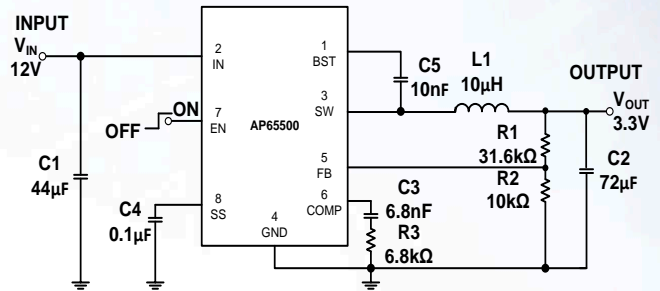
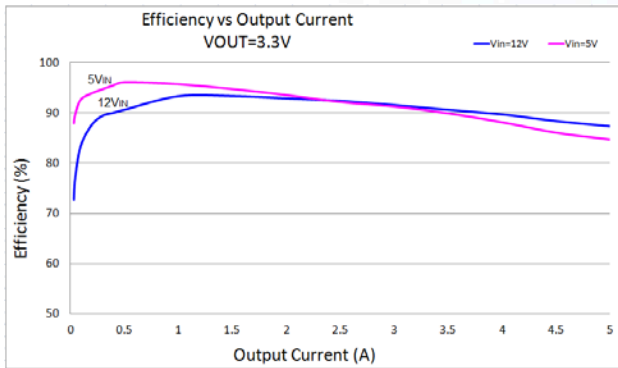
Applications

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



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AP65500 Example



Product Portfolio

Part #	Min. Input Voltage (V)	Max. Input Voltage (V)	Output Voltage (V)	Output Current (A)	Frequency (kHz) typ	Internal Vref (V) typ	Efficiency (%)	Standby Quiescent Current (µA) typ	Operating Ambient Temp Range (°C)	Features							Available Packages
										Enable Pin	Current Limit Protection	Thermal Shutdown	Adjustable Output Voltage	Under Voltage Lockout	Programmable Softstart	Power Good	
AP65400	4.75	18	0.925 to 16	4	340	0.925	96	3	-40 to +85	X	X	X	X	X	X		SO-8EP
AP65500	4.75	18	0.925 to 16	5	340	0.925	96	3	-40 to +85	X	X	X	X	X	X		SO-8EP
AP65402	4.75	17	0.925 to 16	4	500	0.925	96	3	-40 to +85	X	X	X	X	X	X		SO-8EP
AP65502	4.75	17	0.925 to 16	5	500	0.925	96	3	-40 to +85	X	X	X	X	X	X		SO-8EP
AP65403	4.75	17	2.5 to 16	4	750	0.925	96	3	-40 to +85	X	X	X	X	X	X		SO-8EP
AP65503	4.75	17	2.5 to 16	5	750	0.925	96	3	-40 to +85	X	X	X	X	X	X		SO-8EP

For Further Information see:

DC-DC Buck Converter Page: http://diodes.com/catalog/buck_converter_57/

Ordering Information

Device	Packaging	\$ @ 250k	Reel Size	Quantity
AP65400SP-13	SO-8EP	0.45	13"	2500
AP65500SP-13	SO-8EP	0.49	13"	2500
AP65402SP-13	SO-8EP	0.45	13"	2500
AP65502SP-13	SO-8EP	0.49	13"	2500
AP65403SP-13	SO-8EP	0.45	13"	2500
AP65503SP-13	SO-8EP	0.49	13"	2500