



ACE74016P

16V/2A/High efficiency/Sync. Step-Down Converter

Description

The ACE74016P is a fixed frequency, current control mode monolithic step-down voltage converter. Operating with an input range of 4.0V-16V, the ACE74016P delivers 2A of continuous output current with two integrated N-Channel MOSFETs. At light loads, converters operate in low frequency to maintain high efficiency and low output ripple.

The ACE74016P guarantees stability with short circuit protection, thermal protection, current run-away protection, and input under voltage lockout.

The ACE74016P is available in SOT23-6 and SOT-563 package, which provides a compact solution with minimal external components.

Features

- Input voltage from 4.0V to 16V
- Output Current : 2A
- Up to 95% efficiency
- Fixed Switching Frequency: 600KHz
- Input under-voltage lockout
- Start-up current run-away protection
- Over current protection and Hiccup
- Thermal Protection
- Available in SOT23-6 and SOT-563 package

Applications

- Distributed Power System
- Networking System
- FPGA 、 DSP 、 ASIC Power Supplies
- Green Electronics/Appliances
- Laptop Computers



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Absolute Maximum Ratings ^(Note)

Symbol	Items		Value	Unit
V_{IN}	Input voltage		-0.3~16	V
V_{SW}	Voltage of Pin SW		-0.3~ $V_{IN}+0.3$	V
V_{EN}	Voltage of Pin EN		-0.3~ $V_{IN}+0.3$	V
V_{FB}	Voltage of Pin FB		-0.3~4	V
V_{BS-SW}	Voltage difference between Pin BS and SW		-0.3~4	V
V_{SW_Dyn}	Transient voltage of PIN SW in 10ns		$V_{IN}+3 \sim GND-5$	V
P_{TOT}	Dissipation power	SOT23-6	0.5	W
		SOT-563	0.5	W
R_{JA}	Thermal resistance	SOT23-6	270	°C/W
		SOT-563	250	°C/W
T_J	Junction temperature		-40~150	°C
T_A	Ambient temperature		-40~85	°C
T_{STG}	Storage temperature		-55 to 150	°C
T_{SOLDER}	Package lead soldering temperature		260°C, 10s	

Note:

Exceed these limits to damage to the device. Exposure to absolute maximum rating conditions may affect device reliability.

Recommended Operating Condition

Symbol	Description	Min.	Typical	Max.	Unit
V_{IN}	Input voltage range	4.0		16	V
I_{OUT}	Output current		2		A
L	Inductance range		4.7		μH

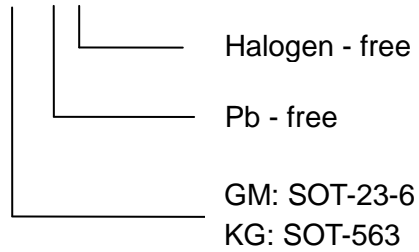


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Ordering Information

ACE74016P XX + H





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Notes

ACE does not assume any responsibility for use as critical components in life support devices or systems without the express written approval of the president and general counsel of ACE Technology Co., LTD. As stated herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury to the user.
2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

ACE Technology Co., LTD.
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