



ACE73640Z

40V/3A, 9 μ A IQ, High Efficiency Synchronous Step-Down Converter

Description

The ACE73640Z is a high-efficiency and high-frequency DC-to-DC step-down switching regulator, capable of delivering up to 3A of output current. The device operates with input voltage from 3.6V to 40V, making the ACE73640Z ideal for wide input voltage range power conversion. ACE73640Z adopts adjustable frequency current mode, the high frequency allows the use of small inductance value and low DCR inductors, thereby achieving higher space efficiencies. During light load, the converter goes into PFM mode that saves switching loss to achieve high power efficiency.

ACE73640Z is available in ESOP8 package.

Features

- Wide Input voltage range 3.6V-40V
- Ultra-No-load IQ 9 μ A
- Capable of Delivering 3A output
- Current mode Control
- Programmable switching frequency
- High Efficiency PFM mode at light load
- High Efficiency Synchronous operation
- Low R_{DS(ON)} Internal power FETs
- Thermal Shutdown and UVLO protection

Application

- Vehicle Electrical Devices
- Smart Home
- Surveillance

Absolute Maximum Rating

Parameter	Value	
IN, SW, EN Voltage	-0.3V to 45V	
BST Voltage	-0.3V to SW+6V	
FB, FOSC, VCC Voltage	-0.3V to 6.5V	
Operating Temperature Range	-40°C to 85°C	
Storage Temperature Range	-55°C to 150°C	
Thermal Resistance	θ_{JA}	50°C/W
	θ_{JC}	10°C/W
Lead Temperature (Soldering 10sec)	260°C	

Note: Exceeding these limits may damage the device. Exposure to absolute maximum rating conditions for long periods may affect device reliability.

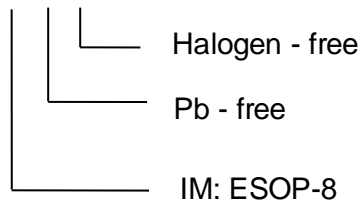


ACE73640Z

40V/3A, 9μA IQ, High Efficiency Synchronous Step-Down Converter

Ordering information

ACE73640Z XX + H





ACE73640Z

40V/3A, 9 μ A IQ, High Efficiency Synchronous Step-Down Converter

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 used 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.
<http://www.ace-ele.com/>