# ACE73760Z

## 60V/1.5A, High Efficiency Synchronous Step-Down Converter

### Description

ACE73760Z is a high-efficiency DC-to-DC step-down switching regulator with up to 60V operation input voltage and up to 105V standoff voltage. It is capable of delivering up to 1.5A output current. ACE73760Z adopts an adaptive COT control scheme that enables very fast transient response and provides a very smooth transition when the output varies from light load to heavy load. During light load, ACE73760Z goes into a PFM mode that saves switching loss achieving high efficiency. The adaptive COT control also maintains a constant switching frequency across line and load.

ACE73760Z is available in ESOP8 package.

### Features

- Wide Input Range: 7V-60V
- 65V Standoff Input Voltage
- Up to 1.5A Output Current
- Adaptive COT Control
- Ultra-fast Load Transient Response
- High Efficiency PFM Mode at Light Load
- Internal Power FETs
- Thermal Shutdown and UVLO
- Available in ESOP8 Package

### Application

- Non-Isolated Telecommunication Buck Regulator
- Secondary High Voltage Post Regulator
- Automotive Systems
- POE

### Absolute Maximum Ratings

| Parameter | | Value |
|---|---|---|
| IN Voltage | | 65V |
| EN, RON, SW Voltage | | VIN+0.3V |
| BST Voltage | | SW+6V |
| FB Voltage | | 6V |
| VCC Voltage | | 28V |
| SW to ground current | | Internally limited |
| Operating Temperature Range | | -40°C to 85°C |
| Storage Temperature Range | | -55°C to 150°C |
| Thermal Resistance | $\theta_{JA}$ | 10°C /W |
| | $\theta_{JC}$ | 30°C /W |
| Lead Temperature (Soldering 10ssec) | | 260°C |

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

## Ordering information

ACE73760Z XX+ H

- H: Halogen - free
- +: Pb - free
- XX: IM: ESOP-8

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 sued 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 shoes 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.