



ACE7740LA

40V, CC&CV Buck Converter

Description

ACE7740LA has an optimum input voltage, step-down converter that operates in either CV (Constant Output Voltage) mode or CC (Constant Output Current) mode. The maximum input voltage is up to 40V and the operation input voltage from 8.5V to 36V.

MOSFET, what build in 55mΩ High-Side and 30mΩ Low-Side, could deliver up to 3.5A of continuous output current and the output current accurate to within $\pm 7\%$.

No external compensation component requirement. The line compensation and the constant current can be set by an external resistance.

Independent output voltage protection suits for BC1.2 and QC2.0/3.0 dual channel output voltage.

In conclusion, ACE7740LA is a full function and high performance, high reliability buck DC-DC converter.

Features

- 100% duty cycle car charge scheme
- Build in high-side and low-side MOSFET
- Max output current: 3.5A
- Adjustable output voltage, VFB=1V
- Excellent constant current accurate: $\pm 7\%$
- Constant voltage accurate: $\pm 2\%$
- No external compensation needed
- Jitter function
- Efficiency: up to 95%
- Adjustable line compensation
- Short circuit protection
- Over voltage protection
- Thermal shutdown protection
- Under voltage lock-out
- Available in SOP-8 package
- ESD HBM >5KV

Application

- Car DVD
- Block Box
- Car Charger
- Industry Application



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Absolute Maximum Ratings

Parameter	Value
VIN to GND	-0.3 to 43 V
SW to GND	-0.3 to 43 V
BS to GND	-0.3 to 43V
CSP, CSN, PRO to GND	-0.3 to 25 V
V _{FB} to GND	-0.3 to 6 V
Max operating junction temperature (T _J)	125°C
Ambient temperature (T _A)	-40°C – 85°C
Package thermal resistance (θ _{JC})	45°C / W
Storage temperature (T _S)	-40°C – 150°C
Lead temperature & time	260°C, 10S
ESD (HBM)	>5000V

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



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Ordering Information

ACE7740LA XX + H

- └─ Halogen - free
- └─ Pb - free
- └─ FM : SOP-8



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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 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.